



Metro Vancouver Transportation Effect Report

The impact of transportation
improvements on housing in
the Metro Vancouver area.



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Table of Contents

About the <i>Transportation Effect Report</i>.....	1
REIN’s Transportation Formula.....	2
This Report at a Glance (aka Executive Summary).....	3
General Transportation Definitions.....	5
Into the Future: Transportation Disrupters.....	7
Mobility Disrupters and New Transportation Concepts.....	7
Sociocultural and Demographics Influence on Transportation.....	8
Transportation-Oriented Communities and Community Nodes.....	11
Transportation Effect: History and Research Findings.....	12
Research Findings: Summary of Values, Rents and Distances.....	12
Property Values and Transportation: New and/or Expanded Studies.....	14
Metro Vancouver Overview and Insight.....	27
About Metro Vancouver.....	28
Who Uses Transit?.....	28
The Changing Face of Metro Vancouver.....	29
The Guiding Documents.....	29
Funding Stages and Transportation Plans.....	31
Some Community Nodes in Metro Vancouver.....	34
Urban Centres Designations.....	35
Beyond Trains: Other Transportation Projects Planned for Metro Vancouver.....	36
Metro Vancouver Summary.....	40

About the *Transportation Effect Report*

This report summarizes the relevant academic research, theories and formulas on transportation, and their impact on real estate. This is called the “transportation effect.” The report begins with a macro approach, based on REIN’s Transportation Formula, followed by an overview of pertinent studies and findings, and presents several case studies to illustrate research findings. It concludes with a micro analysis of current transportation plans in the related city.

While the transportation effect applies primarily to LRT and highway access, this report also considers future modes of transportation and transportation disrupters, as well as demographics and socioeconomics correlations with transportation, primarily with regard to LRT.

Our goal is to present an objective and research-oriented perspective of transportation and real estate, empowering investors to see how new and/or proposed transportation projects may affect their real estate portfolios and helping investors to plan for the acquisition or disposition of real estate well in advance of the full impact of transportation upgrades or completions.

For Homebuyers

For many Canadian homeowners, much of their personal net worth is tied to the value of their homes, which makes information impacting the value of real estate a very important planning tool. As with our previous reports and books, the goal of this report is not only to assist homeowners in gaining insight about how a project may affect their net worth, but also to cut through the emotions and debate that surround transportation projects.

For Investors

Whether investing in a single-family home, commercial retail plaza, multi-family apartment or condo, whether by yourself or through an investment company, or choosing to invest through a Real Estate Investment Trust (REIT) or Mortgage Investment Corporation (MIC), the formulas, the effect, the research and practical insights you find in this report will help you make informed decisions regarding your portfolio.

Since the publication of REIN’s first breakthrough transportation reports in 2009, REIN has continued to conduct research into current and proposed transportation improvements across Canada. REIN investigates the impact of transportation on real estate prices and rents, including commercial and multi-family properties.

These reports are being reviewed in 2018 to:

1. Validate and update existing transportation and housing research; and
2. Reflect current city transportation developments and plans for practical application, now.

REIN’s transportation reports show the effect LRT and highway access infrastructure can have on property prices and rents. The majority of related academic research focuses on LRT, which is a primary focus of this report. As bus transit and Bus Rapid Transit (BRT) provide fewer benefits to real estate than LRT and highway access, these are therefore only mentioned briefly.

REIN has long incorporated transportation improvements within its analysis through tools and processes such as REIN’s Property Goldmine Scorecard, which introduces the concept of a “market influencer” (see page 51 of the best-selling book *Real Estate Investing in Canada*). What’s a market influencer, you may ask? Simply put, it is a positive or negative change to market conditions that lay outside of a typical real estate cycle. These can include changes in a tax regime, to zoning, or in the case of this report, transportation. For more on our methodology, please refer to REIN’s *Top Ten Towns and Cities* reports, our website, and our education.

This report is not intended as an overview of all of REIN’s research and methodologies, but rather is meant to provide a comprehensive review of this one market influencer, answering the questions:

1. Why is transportation a critical factor in real estate investing?
2. How does it impact tenancy and rents?
3. Where is it in play, in this city, now?

Caveat: While research shows there is typically and likely an impact in value tied to improved transportation (in specific locations), because multiple indicators are always at work in a real estate market and real estate cycle, a single market influencer, no matter how important, does not guarantee that transit improvements will result in increased property prices or rents for every property in every neighborhood.

That said, let's get into the goods!

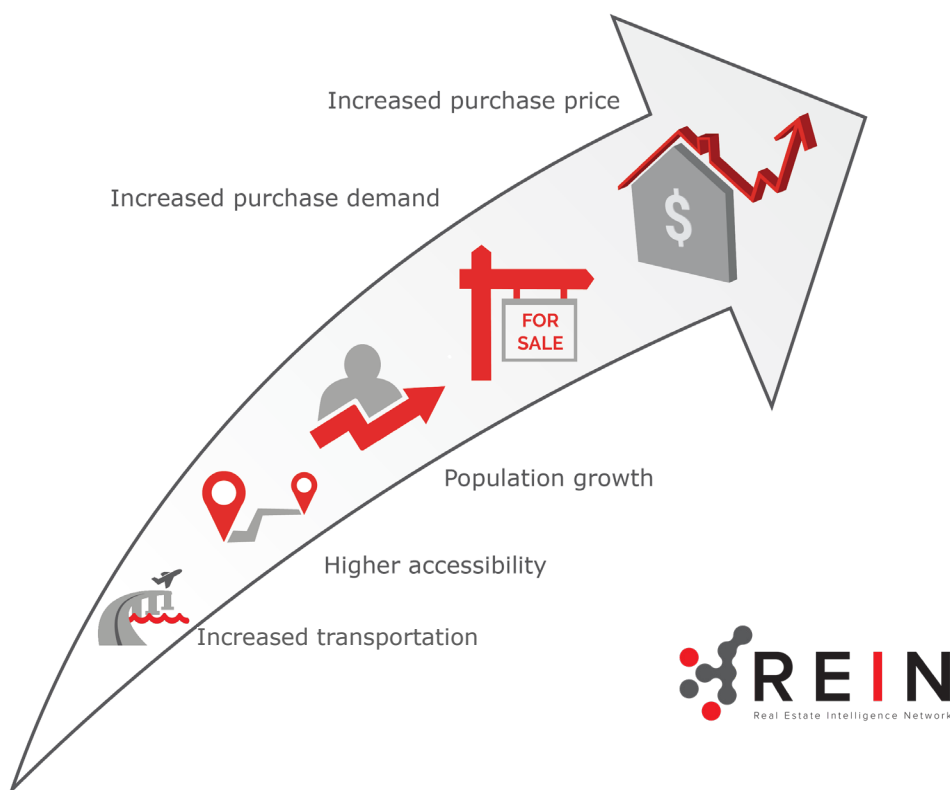
REIN's Transportation Formula

We'll start with this important overview of all transportation that impacts cities on a macro level: REIN's Transportation Formula.

Generally, all major transportation infrastructure influences property values. Why? Because accessibility leads to population in-migration due to the improved economic health of the area. Increased population leads to an increase in demand for real estate, both housing (to rent and buy) and places to work (commercial, retail, and office). An increase in demand typically leads to an increase in values or a buffering of values in a depressed market.

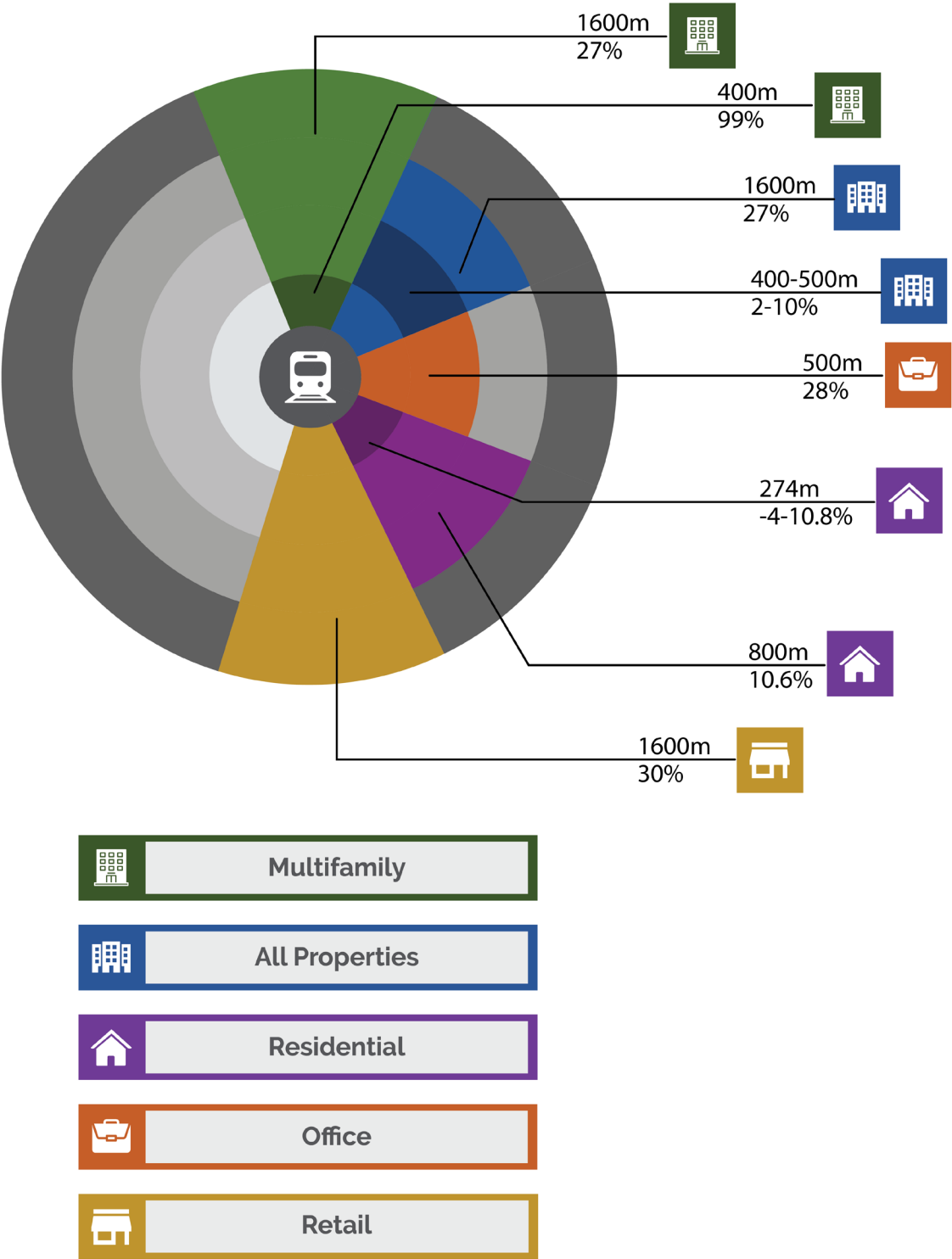
This works in reverse too. The removal of critical transportation infrastructure will negatively impact the above factors, leading to a reduction in real estate values. This will be explained with a case study later in this report, but for now know that you want to watch what is being built AND what is being removed should that be the case.

Figure 1: REIN's Transportation Formula



This Report at a Glance (Figure 2: Executive Summary)

You are busy. We get it. Here’s what you need to know. Then skip to the back for your city’s current transportation plans so you can get this influencer working for you.



Types of Properties

REIN's transportation effect generally impacts all real estate types: residential properties, condominiums, single-family and multi-family residential to commercial office, retail and industrial. Studies show the effect does impact property types differently. Below are some highlights:

Impacts on Values

- Values of real estate in neighborhoods close to mass transit have premiums ranging between one per cent and almost 40 per cent.
- Transportation infrastructure delivers a 10 per cent to 20 per cent enhancement of real estate values within 800 metres of a station. If the market goes up everywhere, these areas will increase by about 10 per cent to 20 per cent more. If real estate values drop, these areas will drop 10 per cent to 20 per cent less.
- A 2007 meta-data analysis of 52 studies on the impact of transit developments on residential real estate prices found an average price increase of 4.2 per cent within 400 metres of a station. Accessibility to transportation ultimately creates value.
- Office space located within walking distance (500 metres) of rapid transit stations had lower vacancy rates by 34 per cent and a price premium of 28 per cent.
- A 2007 meta-analysis reports that, on average, there is a 12.2 per cent premium on commercial properties located within one-quarter mile (400 metres) of a commuter rail station.
- Multi-family properties were between 27 per cent and 99 per cent more valuable within 1600 metres (1 mile) than those beyond 1600 metres, with the greatest premium found within 400 metres (.25 mile) of a station.
- Commuter railway stations have a consistently higher positive impact on property values, compared to light and heavy railway/Metro stations.
- At between 400 and 500 metres, prices typically increase from between 2 per cent and 10 per cent.
- Residential properties less than 274 metres decrease in value from 4 per cent to 10.8 per cent.

Other Impacts

- Residential units near an LRT tend to sell more quickly and at higher prices than comparable units not served by transit.
- The range of these effects varies depending on numerous factors, including distance to the downtown core and the median income of the neighborhood.
- Accessibility is defined as "proximity to stations, stops, and onramps." Do not confuse proximity to transit as being anything other than this type of access.
- Close proximity to the line or route itself has a negative influence.

Transportation and Infrastructure Construction Phases

- Transportation and infrastructure construction phases make a difference: pre-construction and construction phase values within a half mile (.8 km) of stations increased home prices by almost 20 per cent; once transit was active, those same home prices fell by almost 10 per cent for a net positive increase of 10 per cent. It can also take time once a station has opened for an increase in demand to begin exerting upward pressure on real estate prices and rents.

Rents

- Transportation improvements deliver between 10 per cent to 46 per cent enhancement of real estate rents in proximity to a station.
- Due to the “compensation principle,” renters living closer to transportation access points are typically able to save money on transit and thus pay higher rents.

Where in a City Should You Look for Real Estate Connected with Transportation Improvements?

This section summarizes areas most significantly impacted by transportation upgrades and the surrounding neighborhoods most like to benefit from the transportation effect of new and/or proposed transportation (LRT and major highways) in the city under review.

Because transportation impacts are dependant on construction timelines, which is discussed in further detail herein, planned transportation projects are categorized as:

- **First Tier** (Phase — under construction)
- **Second Tier** (Phase — funded)
- **Third Tier** (Phase — approved by city council)
- **Fourth Tier** (Phase — no finalized plans)

REIN encourages investors to watch third and fourth tier projects, but to focus attention on the first and second tiers, and largely on areas where construction has started. Transportation projects are impacted by many influencers including governments, funding, etc., so be certain a project is well on its way before assuming a potential transportation project will go-ahead.

General Transportation Definitions

Transportation used to mean planes, trains and automobiles, but now it can mean many different things to different people, including transportation disrupters like Uber and car-sharing services. Definitions are offered here for clarity within the report.

Planes:

- Airports

Trains:

- Light Rapid Transit (LRT) examples:
 - Metro Vancouver: Sky Train
 - Calgary: C train
 - Kitchener Region LRT
 - Ottawa: O Train
- Heavy Commuter Rail, examples:
 - Metro Vancouver: West Coast Express, Via Rail
 - Greater Toronto Area and Southern Ontario: Metrolinx Go Train

Automobiles:

Automobiles:

- **Autonomous car:** An autonomous car (also known as a driverless car and a self-driving car) is a vehicle that is capable of sensing its environment and navigating without human input.
- **Ride share:**
 - An arrangement in which a passenger travels in a private vehicle driven by its owner, for free or for a fee, especially as arranged by means of a website or app.
 - Ride share companies are also known as transportation network companies (TNCs):
 - » An organization that pairs passengers via websites and mobile apps with drivers who provide such services. Transportation network companies are examples of the sharing economy and shared mobility.
 - » Sometimes known as a mobility service provider (MSP)
 - » Examples: Uber and Lyft
- **Car share:**
 - The practice of sharing a car for regular travelling, especially for commuting
 - Companies like Zip Car and Cars2Go facilitate car sharing among commuters
- **Bus:** A large motor vehicle carrying passengers by road, especially one serving the public on a fixed route and for a fare.
- **Bus Rapid Transit (BRT)**
 - High-quality express bus-based transit system, delivering fast, comfortable, and cost-effective services at metro-level capacities while avoiding the causes of delay that typically slow regular bus services, like being stuck in traffic and queuing to pay on board.
- **Paratransit:**
 - Recognized in North America as special transportation services for people with disabilities, often provided as a supplement to fixed-route bus and rail systems by public transit agencies.
- **Private motor vehicle:** used for the transportation of passengers, or passengers and property. In this case, it is owned and used privately.

Stops and Stations

- **Transit Stops:** Stops on a transit line can be as simple as a pole marker with a sheltered waiting area, seating, and a disposal/recycle bin. Basic stops can be enhanced to accommodate more riders. Stops are usually on the side of the road and are smaller in size and scale than a station. Passenger demand dictates whether the place of boarding and deboarding will be a stop or a station, although stops are usually associated with a bus.
- **Transit Station:** A station suggests significant permanent infrastructure, a named civic gathering spot, and often includes a building that is separated from the traffic that can handle the movement of thousands of people a day. A station can be at grade, above grade or underground. Stations generally have more amenities, such as bike storage, washrooms, ticket dispensers, elevators, and possibly parking or drop-off areas. Passenger demand dictates whether the place of boarding and deboarding will be a stop or a station, although stations are usually associated to an LRT.

Infrastructure:

- **Highway:** A primary road, often connecting multiple towns, also known as an expressway, interstate, or freeway.
- **Bridges and tunnels on highways.**
- **Toll road:** A user must pay to access this infrastructure.

- Designated bike lanes: A designated lane, usually marked, that is strictly for use by cyclists.

Community Planning

- Transportation-Oriented Communities (TOCs)
 - Also called a Community Node
 - See case study: Blatchford
- Central Business District (CBD)

Into the Future: Transportation Disrupters

While fascinating, transportation disrupters like the availability of Uber, vehicle automation, and car/bike/scooter sharing services are not analyzed as part of this report. This is not to downplay the importance these technological shifts are having on our society, given they are impacting all sorts of industries. Academic research on these shifts is only just beginning to emerge. REIN will review and consider the findings as they are published for future research and analysis. The following is a brief overview of the initial findings on transportation and mobility disrupters.

Mobility Disrupters and New Transportation Concepts

Ride Share Versus Public Transport

A recent paper from DePaul University researched five transportation options within Chicago. The research evaluated monetary and non-monetary trade-offs between different types of mobilities, such as LRT, bus and rideshare. The “microeconomic analysis has been made available to explore how service attributes affect choices between ridesharing and public transit.” The report found there is no financial benefit to taking a transportation network company (TNC) over public transit, given the price differential.

The researchers concluded that public transit and ride share serve different transportation needs and thus are complementary services. While there is concern that public transit use is dropping due to the rising popularity of TNCs, it is bus service that is primarily affected, as opposed to commuter rail services in urban areas.

Transportation, Social Change and Employment

A 2018 article written by Shauna Brail, associate professor of urban studies at the University of Toronto, reports transformations in the ways people move themselves is changing employment. For example, automobile manufacturing is a \$3-trillion industry globally, while mobility is now valued at \$5 trillion. There is great potential for jobs to be created in industries associated with urban mobility. The 2018 report calls on cities “to address, manage and direct change through regulatory policy tools,” given disrupters facilitated by technology “such as short-term accommodation rentals and autonomous vehicles, plus new technologies that we haven’t yet begun to imagine” are just beginning to impact urban areas. The author posits that partnerships between government, private industry and academia are key to managing the social change presented by new and evolving technologies, like self-driving cars.

For example, in Innisfil, Ontario, Uber has partnered with the municipal government to provide a service that costs less than public transit. This area is a low-density environment, which would have cost the municipality approximately \$8 million were it not for the partnership. According to an August 2018 article on CityLab, since 2016 alone, 27 communities in the United States have implemented using companies like Lyft and Uber to “supplement or substitute traditional service.” Examples of how these cities are utilizing TNCs include providing free or subsidized trips to LRT stations, replacing paratransit and performing non-emergency transport to the hospital.

Autonomous, Self-Driving Cars and Car-Sharing

The future is here so are semi-autonomous cars. Basically, the driver uses the car's semi-autonomous driving capabilities to arrive at a destination, even right into a parking stall, and even doing those pesky parallel parking jobs for you. Some automakers like Tesla have built this function into its cars. Stay tuned on how they may impact transportation trends. In terms of ride-share testing of semi-autonomous vehicles, on July 11, 2018 Uber suspended its automated testing program following a collision in Arizona in February 2018 that killed a pedestrian. It is believed the company will scale down its testing for the immediate future.

There is speculation that between new technology, car-sharing and autonomous vehicles, we are on the verge of a major disruption in vehicle ownership. According to a CBC news report in January 2018, Vancouver has more car-sharing vehicles (Evo, Modo, Zip car, and Car2Go) on the road than any other city in North America, including the oft-compared metropolis of Toronto. There are 3,000 vehicles available in Vancouver, "more than Toronto (1,650) and Montreal (2,080), and even more than U.S. cities like Seattle (1,900), Portland (1,060) and San Francisco (1,500)." Growth in car-sharing services is evident in other Metro Vancouver cities as well.

From Car Culture to a Bike Culture

Professor Shauna Brail notes that in Toronto, Montreal and Vancouver, "less than 70 percent of commuters commuted in a private vehicle, choosing instead alternatives such as public transit, walking and cycling." Now, bikes are not a new concept. Bikes and bike lanes are a huge part of many European cultures. What's new is the introduction, adoption and expansion of this mode of transportation in Canada's biggest cities.

The use of bike lanes in a city and how this form of transportation is impacted by a city's demographics is not a key impact of the transportation effect; however, bike ridership does impact transit ridership as a whole and is reflective of a city's transportation priorities.

In July 2016, Vancouver launched its public bike share system with an inaugural 250 bikes at 23 stations. Within months that number had reached over 800 bikes at 100 stations. Metro Vancouver's map of the stations and routes on page 26 of the *Walking and Cycling in Vancouver 2016 Report Card* illustrates that the downtown core has the greatest number of stations and is also the busiest. In 2016, 407,818 kms were covered by a Mobi bike.

The 2018 investment plan for Phase 2 of Ten-Year Vision indicates Metro Vancouver has a commitment to collaborate on the exploration of new mobility concepts within its delivery model as a means of providing alternatives to private car ownership. Further, policies for automated vehicles already exist in some cities and are being developed in others.

Sociocultural and Demographic Influences on Transportation

As an investor in real estate, if you cannot purchase a property near a transit station, it is recommended that you purchase a property where a tenant need not commute to work. In other words, more and more, people of all walks of life and demographics are wanting to work, live and play in their neighbourhood. The rise of Transportation-Oriented Communities (TOCs) and multi-zoned developments support this (re)-emerging value (read more on this in the Community Node section of this report). Western society is undergoing significant cultural changes, and real estate investors should be aware of these changes given their impact on transportation and housing. A 2016 study noted that in cities and countries with a stronger transit culture, the positive impact on property values is even greater.

Distance Is Measured in Minutes, Not Kilometres

When people talk about their commute, they generally don't talk about the number of kilometres they drive to get to work; rather, they talk about how long the drive takes them. This stems from two separate realities of our busy society. People care about time, because time is a precious commodity in our busy lives. Research is conclusive that a lower commuting time is linked to greater personal well-being. Also, depending on where you live, roads can have variable speeds, be made more interesting through topography, and be more or less stressful depending on the number of persons using the road, all of which impact driving time. These variables in the urban landscape create a demand for properties with a reduced commute time through the availability of good transit.

In Canada, the number of people taking public transit has increased in every census. In the Community Node section of this report, you will read about entire master-planned communities being organized around transit and the idea of reaching a desired destination within minutes.

The Importance of Walkability

More and more, the distance to the amenities of urban life is measured in footsteps, not kilometres. Further proving that minutes are becoming more important than kilometres is the growing popularity of walk scores. Launched in 2007, www.walkscore.ca calculates an address's walkability by bestowing points for amenities located within a one-mile (1.6 kilometre) radius. Such amenities include schools, places of worship, stores, restaurants and parks.

Realtors are increasingly using walk scores to draw attention to their listings for sale or rent. Using an algorithm, the walk score provides a quantitative alternative to the traditional features often found in ads referring to proximity to amenities. A high walk score is a big draw for potential buyers and renters. The option of having convenient mass transit adds value to a property. Advertising proximity to transit and amenities is a huge benefit and smart marketers are taking this free walking measure and running with it.

Suburbs Versus City Core

Suburban sprawl post World War II led to a reconfiguration of society. Living in the suburbs often means travelling a great distance from home to workplace. "In Canada, we have organized our lives, land and economy around mobility, mostly around a model that privileges private vehicle ownership. Between 1996 and 2016, the proportion of commuters who drove to work in a private vehicle has declined by a mere 1.2 percent, from 80.7 percent to 79.5 percent." The visual evidence in any downtown core clearly indicates a refocus on the urban core, facilitated through densification and infill measures.



Figure 3: 2016 Census Results. Cycling is the Fastest Growing Mode of Transportation in Canada.

The Increasing Cost of Vehicle Ownership

In 2016, Canada's combined total household spending on transportation (including insurance) was \$179.5 billion. One 2018 article estimated a private vehicle costs \$9,000 a year to keep on the road. These figures are second only to shelter in terms of major spending categories. Therefore, it should not be surprising that all cities researched in 2018 have significant transit undertakings in the works for their citizens. As environmental concerns become more compelling and prominent, congestion in cities increases commuting times, and insurance rates and gas prices climb, the demand for public transit has increased.

"Household spending for personal travel accounted for about 10 per cent of GDP"; therefore, lower-income families, Millennials with their debt, or Baby Boomers on a fixed pension may rely on transit more heavily than other groups.

Changing Demographics

Millennials represent approximately 27 per cent of the population. Millennials rent at higher rate than their parental generation, accounting for approximately 50 per cent of those who were age 30 in 2016 and living independently. Millennials are also more likely to live in apartments than Baby Boomers. This demographic has been living at home longer than prior generations but is starting to move out on their own en masse. Millennials aren't willing to give up the comfortable lifestyle they grew up with merely for the bragging rights of owning just any home. They want new homes and they want amenities. Many will choose to pay a premium to rent in the right location instead of paying the same in monthly mortgage costs for an older, outdated home. This cohort wants access to the lifestyle choices offered by social spaces.

Millennials are highly educated, but due to changing employment trends they are often involved in precarious kinds of employment (part-time, contract, on-call and self-employed), and they have large amounts of debt, which presents challenges for obtaining a mortgage.

According to Statistics Canada, there are more Millennials in large urban centres than non-census metropolitan areas, attracted by employment or educational opportunities. However, in May 2018, numbers from Statistics Canada showed that Millennials are moving out of the two most expensive cities in Canada: Vancouver and Toronto. The intraprovincial migration numbers show this cohort is moving to areas of the province where the cost of living is lower.

Baby Boomers are the second-largest generation, representing approximately 21 per cent of Canadians. This group first started entering their retirement years in 2011, yet this is only the beginning of a significant change in society. The last of the Baby Boomers will not turn 65 until 2029. The largest number of Baby Boomers are still in the 55 to 64 age range, and thus many remain in the workforce. According to the 2016 Canadian census, Baby Boomers are more likely to live in rural areas. For those staying in, or moving to, urban centres, Baby Boomers are often looking to downsize into condos as a means of freeing up the equity they have in their home to fund their retirement or help their Millennial children buy a home.

The number of people over 65 is growing five times faster than the number of children under 15, partly due to the massive Baby Boomer generation. According to the 2016 Canadian census, the number of people aged 85 and older grew at nearly four times the rate of the overall population. The centenarian population (i.e., those aged 100 and older) grew even faster, making it the fastest-growing age group between 2011 and 2016. The total population of seniors is now 17 per cent nationwide and growing. This age group is important to real estate investors as they have different housing needs; For example, having all necessary amenities on a single level and proximity to services like health care and transportation. In the upcoming decades, many of this generation will transfer to assisted living and nursing homes. Many of the municipalities where this age group resides in numbers is found on Vancouver Island, BC.

All told, Millennials and Baby Boomers are driving the change in urban planning to that of walkability, density and mixed-use space where work and play are both at the doorstep.

Metro Vancouver is preparing to support this growing demand through several master-planned communities under construction. Examples in Burnaby are The Amazing Brentwood and The City of Lougheed developments. For a more in-depth look at Transportation-Oriented Communities and Community Nodes, read on to the next section.

Transportation–Oriented Communities and Community Nodes

While not solely transportation focused, transportation is an integral component of community nodes. This style of integrated and mixed-use space appears to be the latest focus of urban planning as cities rise to meet changing urban demands, including densification, better public transit and affordable housing.

These developments are what some call innovative zoning, a trend if you will, as cities develop new hubs or nodes as full communities or micro cities within their quadrants, which are integrated into transit plans and lead to the creation of Transportation-Oriented Communities (TOCs).

The case study of Blatchford, Edmonton, is a prime example of community node development. Blatchford was once an under-utilized area that has become a thriving residential and commercial centre.



Figure 4: Site Plan for Blatchford

The development aspires to be carbon neutral, using 100 per cent renewable energy. Of the 536-acre parcel, 80 acres will be devoted to parkland. Much like the LeBreton Flats redevelopment project in Ottawa, there is a lengthy time span of 25 years for the project to come to fruition.

Blatchford is a prime example of innovative zoning, with mixed zoning supporting multi-use communities around transportation hubs. In our review of a 2014 consultation document, there is a strong focus on making Blatchford transit integrated and walkable. The space will eventually connect to the Metro Line Northwest via its own station, located at a current ViaRail station in the eastern portion of the development. Within the plan for Blatchford's Technology and Research District there is a commitment to place the higher-density residential buildings in closest proximity to new LRT stations, which are planned to be within a five-minute walk for any resident of the community.

The process for Blatchford, which began in 2009, is in the infrastructure building phase, while builder selection is also underway for the first phase. The city aims to provide housing for 30,000 people, including seniors housing and affordable housing. According to the results from the 2014 consultation process, car-share programs and ski trails will be incorporated into this new development. "Participants embraced the concept of walkability and transportation modes that encouraged less reliance on the car. They saw this as an indicator of 'big city status,' referring to other cities (New York, Toronto, Vancouver, and cities in Europe) that, through good planning, have made it possible to live car-free." In terms of the housing planned for the site, it will be comprised only of multi-family dwellings; there are no planned single-family homes or duplexes.

Community Node Case Study: Blatchford, Edmonton

Blatchford Summary:

- **City Quadrant:** Edmonton City Centre
- **Name of Line:** Metro Line Northwest
- **Construction/Completion Status:** Infrastructure construction underway
- **Funding Status:** Funded
- **Date of Completion:** Ongoing in phases over 25 years
- **Location:** City Centre Airport Lands
- **Type:** Mixed-use, multi-family. See <https://blatchfordedmonton.ca/>
- **Neighbourhoods to Watch:** Prince Charles, Inglewood, Prince Rupert, Spruce Avenue and Westwood

In Edmonton, AB, a high-density redevelopment neighbourhood is planned for Edmonton's City Centre Airport Lands. Blatchford is a mixed-use urban community with a focus on economic, environmental and social sustainability.

Transportation Effect: History and Research Findings

To create a report that is meaningful to the investor community, we consulted many peer-reviewed transportation research reports. Each of these reports has built on previous scholarship in the field; thus, the reviewed analysis spans decades and geographic boundaries. The research is summarized herein to determine what impact transportation improvements can have on real estate and possible reasons for such changes. The intent of this section is to demonstrate with evidence, both through current street rents and empirical research, that transportation and its infrastructure positively affect both market rents and real estate property prices.

The transportation effect on increasing property values and rents has a long history, with two key studies dating to the mid-1800s.

Academic research findings on the topic of value and rents for properties stem from the work of Von Thünen (1863), who concluded that farm values were predicated on distance to market. This has become known as the compensation principle when discussing real estate values and transportation access. Further, the dominant factors explaining the results on property values were accessibility as measured by the distance to the central business district (CBD) and associated transportation costs.

Similarly, in 1846 London's Royal Commission on Metropolis Railway Termini conducted research to determine the impact of the city's rail access on rents in its poor working districts. The study found that weekly and monthly rents in these districts rose from 10 per cent to 25 per cent as a result of proximity to public transportation stations.

Further, the emerging sociocultural and demographic influences discussed earlier in this report surface several fundamental aspects that cause transportation to impact real estate values. Prior to exploring the latest research findings, this section summarizes some of these foundational key concepts and theories.

Difference Between Light Rail and Highway Improvements

As with rail transit, particularly light rail, accessibility to major highways and highway improvements, including tunnel and bridge infrastructure, prove to be major determinants of increased property values in all studies. Research demonstrates that as highway networks are created and existing corridors to the CBD and major employment centres are upgraded, the value of real estate in the area increases.

The main difference between the rail transit findings and highway findings is merely the impact of vehicle noise from highly travelled highways. The increase in value of residential properties located in close proximity to a highway was partially offset by a reduction in price as noise levels increased. However, counter-intuitively, houses impacted by highway noise did not take any longer to sell than those farther removed.

Therefore, while many of the studies reviewed herein look at rail transit, the transportation effect applies to both rail and highway access.

Research Findings: Summary of Values, Rents and Distances

Key research findings outlined in REIN's previous transportation reports are tested and validated throughout this report in several case studies and in neighbourhood-specific data. These reports build on prior research and offer new insights to support investors even more with their investment decisions.

See Table 1 on page 16 for a summary of key research based on property type, value increases, rent increases, and distance from access to transportation infrastructure. Recall these generally apply to rail and highway access.

Compensation Principle

The compensation principle, suggests “reduced transportation costs allow households to spend more on housing and, in turn, bid up the rents or prices of homes located in areas with low commuting costs; this is precisely what creates the land value/density gradient.” In other words, real estate nearest the central business district (CBD) is often more expensive, either to purchase or rent. As saturation occurs in the CBD and property is less, or no longer, affordable, people begin to move to locations outside the downtown core. This is known as REIN’s Doppler Effect, and this phenomenon often results in people commuting longer distances. Therefore, access to public transportation, which is either cheaper than owning a vehicle or allows for a quicker commute, essentially gets the individual back in proximity to the CBD, which drives up the value of real estate in the immediate vicinity of the transportation amenities.

Supporting REIN’s Transportation Formula and Effect, Kilpatrick et al (2007) argue that accessibility to transportation ultimately creates value, which is realized through “proximity to stations, stops, and onramps.” Do not confuse proximity to transit as being anything other than access. Multiple studies between 1996 and 2003 demonstrate “proximity to the line or route itself has a negative influence.”

Compensation Principle: Bigger Effect, Further from CBD

The greatest increases in property values have been found in the neighbourhoods farthest from the CBD, due to the requirement to travel and get into the CBD for work and/or play. The farther one needs to commute for work, the more likely one is to require access to transit; thus, the more one is willing to pay to be close to such access.

Research indicates that those commuters who live in close proximity to transit save over \$1200 per year. In other words, as a landlord, your tenant may benefit from transit savings of \$1200. The prices of real estate in areas with improved transit have not increased proportionately to the cost savings of using transit over using a car to commute. A study conducted in the 1980s found that in Metropolitan Toronto, the savings realized from living in an area that afforded a shorter commute using transit translated into a willingness to pay more for homes that delivered these time savings.

Compensation Principle: Socio–Economics Matter

The socio-economic status of the renter matters as well, so consider your ideal tenant profile. Bowes and Ihlanfeldt (2001) note that accessibility to transit is of more importance to lower-income families, while for higher-income families the negative aspects of a transit station dominate. Low-income residents are more likely to rely on transit, and more likely to have to walk to the transit station; thus, the locations in the immediate vicinity of transit have higher values to this tenant.

Revitalization: Station Design Matters

Stations may also attract commercial activity, such as new retail and service opportunities that benefit the locals, even if they do not utilize transport. These amenities can also affect real estate values. The literature suggests this has much to do with general market conditions and city zoning.

Recently published research on revitalization in neighbourhoods in Washington, D.C. indicates that “revitalization of the Columbia Heights and Petworth neighborhoods was jumpstarted by the introduction of metro subway stops. The subway has had a transformative effect on these areas and has brought in new apartment buildings, restaurants, and shops.”

Bowes and Ihlanfeldt (2001) suggest station characteristics can impact whether an increase in property values can be accounted for, including whether the station has a parking lot. Home values decreased due to unsightliness and the potential increases in congestion, noise and pollution, but only within one-half of a mile (800 metres) to one mile (1600 metres) from the station. For houses beyond three miles (4.8 km) from a station, a parking lot provides a 4.7 per cent boost in average home values. Parking lots invite criminal activity, which decreases beyond a radius of the lot.

The 2001 study by Bowes and Ihlanfeldt found that a parking lot at the station significantly reduced values within a quarter mile (400 metres) of the station. However, a 1997 article by Workman and Brod suggests that the decrease in value due to a parking lot is only present in the first several blocks; a premium becomes evident by the fifth or sixth block from the station. Thus, we see the challenges of generalizing research. So often, city specific variables appear to influence the outcome of the research on transportation and real estate values.

Property Values and Transportation: New and/or Expanded Studies

Values: Single–Family Study (2012)

A 2012 paper summarized research conducted in Montreal on 63,784 properties sold near four stations between 1992 and 2009, and found the impact of commuter rail transit on single-family property values to be:

... positive, and significant ... which decreases with distance to the nearest station. Thus, on-foot proximity to stations results in an average market premium of 1.5 per cent, 1.3 per cent and 1 per cent for houses located within 500m (.31 mile), between 500m (.31 mile) and 1 km (.62 mile) and between 1 and 1.5 km (.93 mile) from a station, respectively. Car accessibility also translates into a significant premium averaging 3.6 per cent of property value, with a maximum of 4.7 per cent for properties that are 9.2 minutes away from a station.

Values: Multi–Family Study (2016)

A 2016 paper researching Los Angeles transit between 2003-2004 found multi-family property values benefit from close access to rail transit stations, yet the effect is negative for single-family properties. "Keeping all other variables constant, the value of an average multi-family property within 400 m of a proposed station is more than twice the value of its counterpart located beyond 1600 m of the station." Plainly stated, multi-family properties were between 27 per cent and 99 per cent per cent more valuable within 1600 metres than those beyond 1600 metres (1 mile), with the greatest premium found within 400 metres (.25 mile) of a station. However, the largest premiums for the multi-family properties occurred during the proposal and completion stages of the station, while a newly opened station did not appreciate as much. This study found that Park-and-Ride facilities decreased property values, likely due to the increased noise and traffic.

Values: LRT Extension Study (2017)

In a 2017 article, a researcher evaluated the value of an extension of a LRT line. The researcher's analysis relied on repeat sales of homes in New Jersey. The first sale took place before the announcement of the extension, while the second sale of the same home occurred after the opening of the station three years later. The results of the study indicated "no statistically significant impact on annual house price appreciation." The researcher found no evidence that properties closer to the station had a greater appreciation in value than properties farther away. Note, though, that research was limited to a single station, and research shows that stations on the same line can experience different valuations.

However, the 2017 article noted above by Camins-Esakov and Vandegrift regarding the extension of an LRT line quotes multiple other academic papers. The overall findings are that there is a primarily positive effect on housing prices with the addition of new transit options.

Values: Highways, Bridges, and Tunnels Studies

When studying four key residential areas being affected by a new major highway expansion, using over 18,800 property sales as research data, a direct correlation was determined between the increase in accessibility provided by the highway and the value of the residential property. The results showed residential property values rose by 12 per cent to 15 per cent over similar properties not impacted by the new highway. This is a significant and permanent lift in values. In fact, according to one Texas study, of all types of land use, single-family residences showed one of the largest per-square-foot increases.

In one study, properties located in commercial–industrial areas serviced by highway improvements experienced a 16.7 per cent increase in value after the highway was opened. Research into the impacts of specific projects suggests some very pointed effects, namely, the design of the freeway is important and impacts value:

- Depressed freeways contributed the most to residential property values, yet had limited impact on commercial property values, except for those located adjacent to exit and entrance ramps
- At-grade designs had the most positive impact on commercial property values, while still providing a strong positive impact on residential values
- Elevated highways had the least impact on all land values

Overall, the completion or expansion of major arterial highways has a significant positive impact on accessibility and, therefore, property values. This ripples across all types of property, from single-family and multi-family residential to commercial and industrial.

When there are highway improvements in the area, research found the following:

- 12 per cent to 15 per cent increase of residential property values
- Single-family residences showed one of the largest per-square-foot increases (approximately \$35.00 per square foot)
- Values of commercial properties located 800 metres or more from a freeway on/off ramp were valued at \$50,000 less per acre of land and \$3 per square foot of structure less than properties located in closer proximity to on-off ramps
- It is important to also point out the negative findings with regards to highway improvements:
 - The increase in value of residential properties located closest to the highways were partially offset by an up to 1.2 per cent reduction for every two-decibel increase in highway noise level
 - Noise, pollutants from emissions and dust, and traffic delays negatively impact the sale price of land in areas immediately adjacent the construction; this price decrease ranges from \$0.05 to \$0.50 per square foot of land

Values: Distances: Meta–Data Study (2007) and Metro Vancouver Study (2007)

While evidence suggests that correlations between transportation infrastructure and characteristics and real estate values date back to the mid-1860s, the most thorough evidence is best shown in a meta-data analysis of the effect of transit developments on real estate prices by Debrezion, Pels, and Rietveld (2007). Of 73 previous studies of hedonic pricing effects of transit, they found 52 focused on residential housing prices. The overall effect for residential properties was about 4.2 per cent for the average residence within a quarter of a mile (400 m) from the station."

This 2007 meta-data analysis shows that not all transportation is created equally: "Commuter railway stations have a consistently higher positive impact on the property value compared to light and heavy railway/Metro stations."

The following is a summary of a few of the salient academic references utilized by Kilpatrick et al in their meta-data analysis:

- Voith (1993) reports an increase of 6.4 per cent for homes near Philadelphia's train stations;
- Armstrong (1994) finds a housing price premium of 6.7 per cent for suburban Boston communities with commuter rail stations; and
- Benjamin and Sirmans (1996) report a decrease of 2.4 per cent to 2.6 per cent in housing price for every tenth of a mile (161m) away from a Washington D.C. Metro station.

Table 1: Review of Impact of Rapid Transit on Land Values in Selected North American and Australian Areas

Source	Case/Location	Impact on	Findings
Trillium 2009	North America	Single-family residential properties	Price impacts on single-family residential properties ranged from minus 10.8% in Santa Clara County to an increase of 32% in St. Louis, Missouri. Apartment rental rates increased up to 45%.
Al-Mosaind 1993	Portland light rail transit	Single family residential units within 500m of the transit line	Sold for 10% higher than properties located further away from the line
Chen et. Al 1997	Portland light rail transit	Single family properties located in the vicinity of the Portland light rail	10.5% increase in the value
Hess and Almedia 2007	Buffalo, NY light rail	Residential property within one-quarter of a mile (400m) from a light rail station	Premium between 2 to 5% of the city's median home value
Herbert Levinson et al 2003	Brisbane's Southeast Busway (Bus Rapid Transit), Australia	Property and home values within walking distance of busway stations	Property and home values grew by up to 20% and two to three times faster than property values in the surrounding area.
Trillium 2009	North America	Office properties	Price impacts range from no appreciable change in the San Francisco Bay area to a 120% rental rate increase for downtown San Jose
Jones Lang LaSalle, 2013	Metro Vancouver Area	Office properties	Office space located within 500m from a transit station in urban or suburban areas pays 10 to 30% more than comparable office space located farther away
Trillium 2009	North America	Retail Properties	The greatest variance was seen in retail properties, where the recorded price impacts range from no perceptible impact in the San Francisco Bay area to a price increase of 167% in San Diego.

Table 1 above references a study commissioned by Metro Vancouver's TransLink that compares studies on the impact of 12 rail projects (including both heavy rail and light rail) on property values throughout North America. The study concluded that "the relative increase in accessibility provided by the new transit investment is the primary factor in increasing property values." To summarize the contents of Table 1, at between 400 and 500 metres, prices increased from between 2 per cent to 10 per cent, while other studies reported increases up to 32 per cent for properties at an uncalculated distance from the station.

Jones Lang LaSalle (2013) found that residential units near LRT tend to sell more quickly and achieve higher prices than comparable units not served by transit.

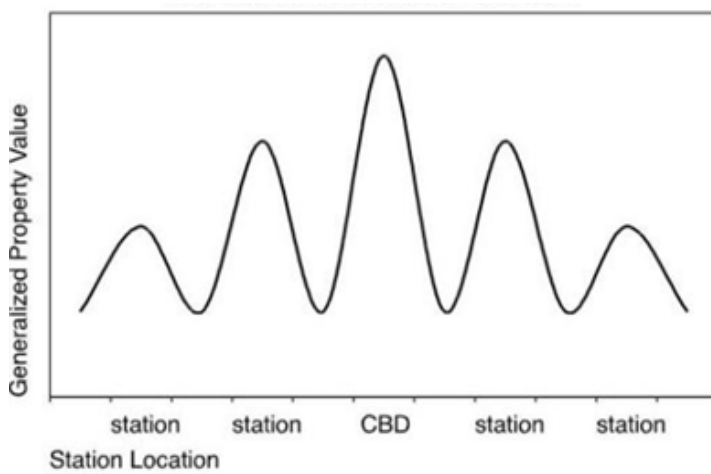


Figure 5: Peaks and Valleys of Property Values at Rail Stations in Relation to the CBD

Therefore, past studies conducted across North America have found the values of real estate in neighbourhoods close to mass transit had premiums ranging between 1 per cent and almost 40 per cent, but the range of these effects varies depending on numerous factors, including distance to the downtown and the median income of the neighbourhood.

The positive effects of proximity to passenger rail transit appear to be limited to homes located within a one-half mile (0.8 km) radius of stations. Even announcements of improvements that will shorten and ease commutes have resulted, historically, in higher-valued housing developments in comparison to new developments located a greater distance from these opportunities.

As detailed in Figure 5, the property values nearest to the stations had a dramatic increase in their average value. This effect was maximized in a zone of 500 to 800 meters surrounding each station. One study on the impact of the Los Angeles Metro Rail system revealed that properties located within one-quarter mile (400 metres) of a rail station enjoyed a value premium of \$31 per square foot.

Values and Distances: Commercial Property

Successful examples of land value premiums for the commercial sector in Canada includes Metro Vancouver's rapid transit stations as established by an empirical study by Jones Lang LaSalle (2013). In the first quarter of 2013, office space located within walking distance (500m) of rapid transit stations had lower vacancy rates by 34 per cent and a price premium of 28 per cent, relative to comparable office space beyond 500 metres. While changes were made viable by the increased access provided by rapid transit, a substantial portion of the increase was due to zoning changes.

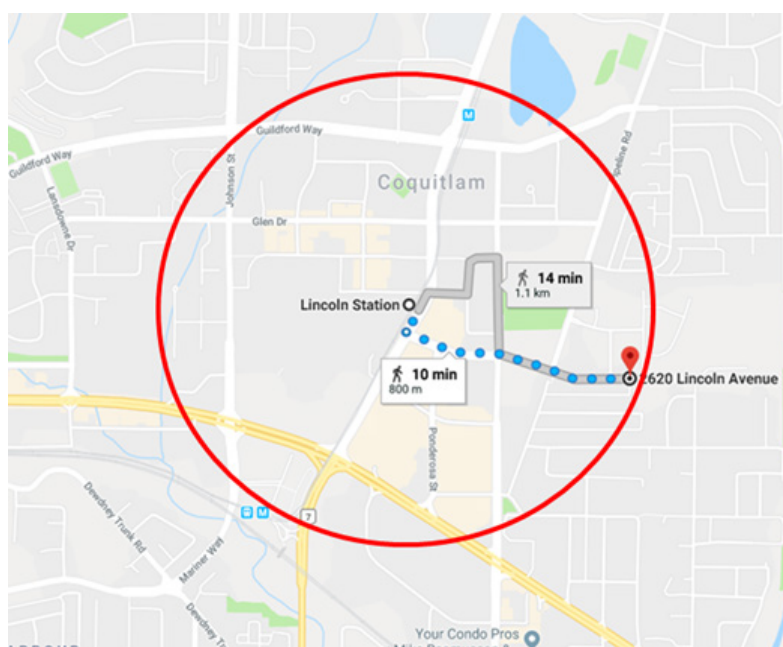
Values of commercial properties located 800 metres (.5 mile) or more away from a freeway off/onramp were valued lower than properties located closer to the access point, proving once again that accessibility and visibility is key. A 2007 meta-analysis reports that, on average, there is a 12.2 per cent premium on commercial properties located within one-quarter mile (400 metres) of a commuter rail station.

Values and Distances: A Case Study of Distances to Stations, Community Nodes, and Property Values at Lincoln Station, Coquitlam, B.C.

Lincoln Station Summary:

- **City Quadrant:** City Centre - North Coquitlam neighbourhood
- **Name of Line:** Millennium Line Evergreen Extension
- **Construction/Completion Status:** Complete
- **Funding Status:** N/A
- **Date of Completion:** Opened December 2, 2016
- **Location:** Across from Coquitlam Centre Mall on Pinetree Way Street
- **Type:** LRT
- **Neighbourhoods to Watch:** Oxford Heights and Harbour Village

Figure 6: The Location of Lincoln Station on the Evergreen Line



The red circle on the map demonstrates the approximate space covered within 800 metres and/or a 10-minute walk from Lincoln Station. This North Coquitlam neighbourhood is a more expensive area than the rest of Coquitlam, and the numbers show this neighbourhood has been such for the last three years, but not at the 5- or 10-year mark. This specific neighbourhood has a median apartment price almost \$48,000 higher over the rest of Coquitlam and has been between one per cent and five per cent more expensive in each of the last three years.

Figure 7: 800–Metre Circumference Around Lincoln Station

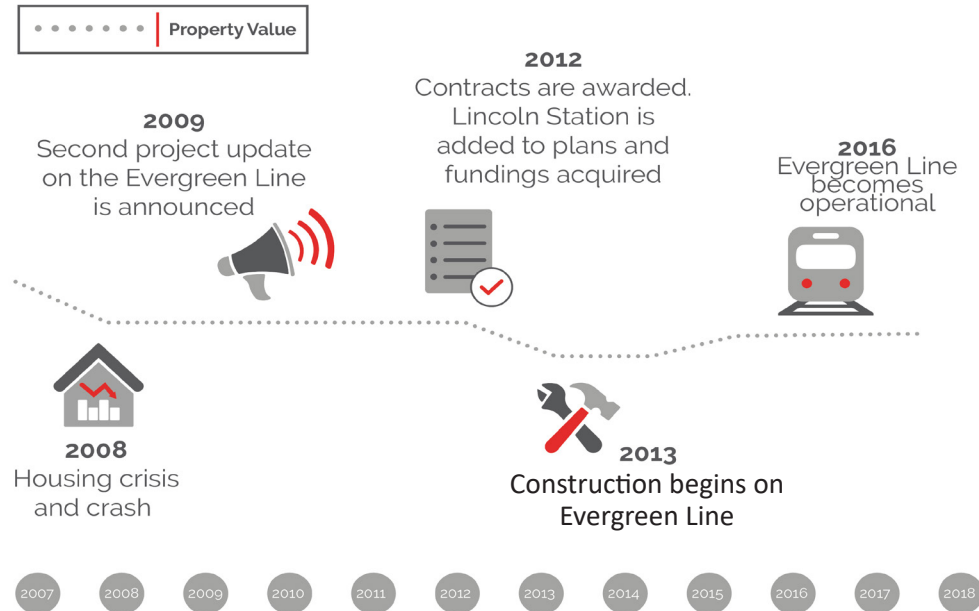


Figure 8: Lincoln Station Construction Timeline

Table 2: Apartment Price Comparison for Lincoln Station

North Coquitlam	Then (2014 — 2015)	Now (2018)
Rental Rates (2-bedroom apartment):		
City Average	\$643 (1990)	\$2492
Neighbourhood	N/A	\$2298
Average Condo Prices:		
City Average	\$258,300	\$537,000
Neighbourhood	\$256,700	\$538,100

To determine the numbers in the table above, the following sources were used:

- The average Coquitlam condo price in July 2018 has been gathered from Zolo.
- The average Coquitlam condo price in January 2014 has been obtained from the Real Estate Board of Greater Vancouver.
- The Faith Wilson Group Realtor website provided the benchmark apartment price for the neighbourhood as of July 2018 and for January 2015.
- Canada Mortgage and Housing Corporation (CMHC) provided the average 1990 rental rates for the Tri-Cities area for a two-bedroom apartment.
- The average rental rate for a two-bedroom apartment for both Coquitlam and the neighbourhood on July 13, 2018 came from listings on Padmapper.

Values: Construction Phases

Classical economic theory posits that when a transportation infrastructure is initially built, large parcels of land that previously had poor accessibility—or none—are suddenly considered underpriced. This results in a rapid correction in the market, driving up the value of the land. Development is usually quick and the impact significant. Additionally, improvements to existing highways showed a positive increase to land prices, although to a lesser degree.

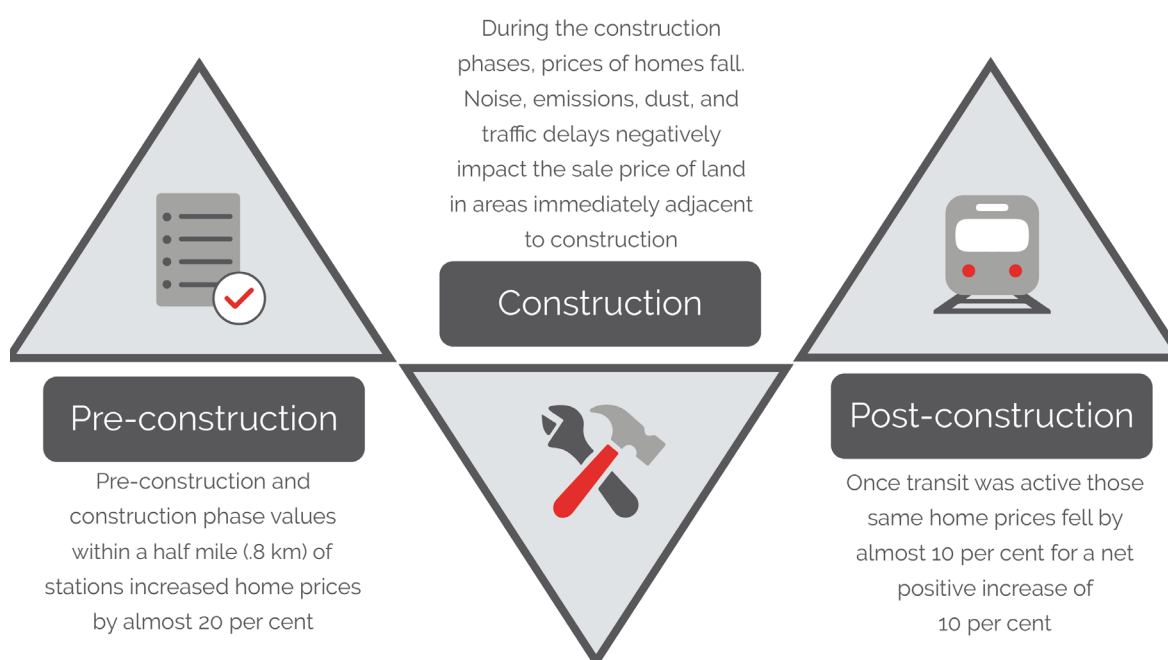
Further, Kilpatrick et al (2007) determined that time can create variations in house prices relative to the construction phase of transit. Studies of Chicago's Midway line published in 1995 and 2004 found that pre-construction and construction phase values within a half mile (0.8 km) of stations increased home prices by almost 20 per cent; yet, once transit was active those same home prices fell by almost 10 per cent for a net positive increase of 10 per cent.

However, during the construction phases, prices of homes fall. Noise, emissions, dust, and traffic delays negatively impact the sale price of land in areas immediately adjacent to construction. In fact, one study showed that values did not reach pre-construction levels again for five years post-construction.

As we like to emphasize, anything can happen in this sector. Transportation projects are impacted by many influencers including governments, funding, etc., so be certain a project is well underway before acting. And that's why REIN encourages you to consider focussing on areas where construction has started. Focus your acquisitions on tier one, watch tier two closely, and follow along for updates for tiers three and four to guide you in the future.

- **First Tier** (Phase — under construction)
- **Second Tier** (Phase — funded)
- **Third Tier** (Phase — approved by city council)
- **Fourth Tier** (Phase — no finalized plans)

Figure 9: Values During Construction Phases



Values: Construction Phases – A Case Study of Transportation Construction Phase Values in Ottawa, ON

The Confederation Line in Ottawa is a new east-west line that connect to the existing north-south Trillium Line.

This area performed as research suggests. Real estate prices increased roughly 39 per cent since the announcement of the LRT, compared to Ottawa's overall gain of 37 per cent between 2008 and 2017, a premium of 2 per cent. There was a spike in prices when the announcement came the LRT would move forward, based on the anticipated benefits the LRT would bring. However, the lengthy construction phase with its noise, inconvenience and air pollutants dampened the enthusiasm for living in the area and prices dropped and/or stagnated. Based on research and experience, over the next two years we can watch this area and expect to see values increase roughly 10 per cent over other areas of Ottawa without access to the LRT.

Figure 10: A Case Study of Construction Phase Values

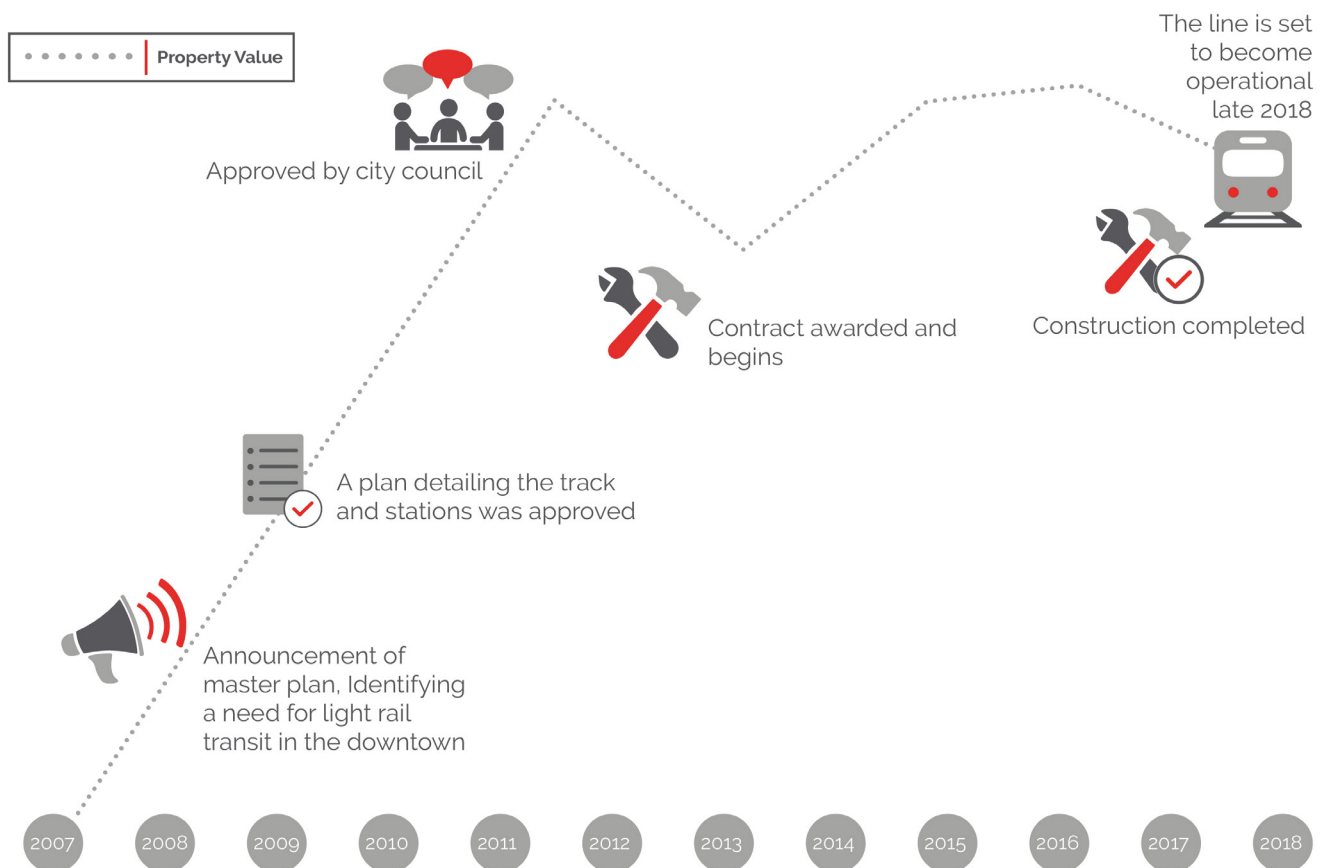
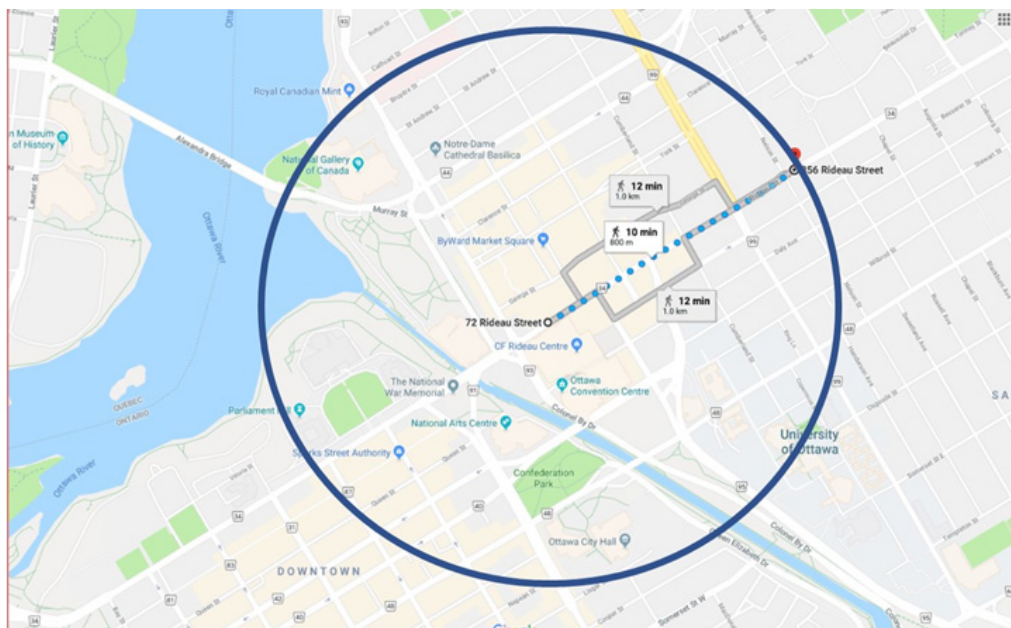


Figure 11: 800 Metres Around the New Rideau Station



Rideau Station Summary:

- **City Quadrant:** City Centre
- **Name of Line:** Confederation Line
- **Construction/Completion Status:** Complete
- **Funding Status:** N/A
- **Date of Completion:** Opening late 2018
- **Location:** Rideau Centre on Rideau Street
- **Type:** LRT with underground station
- **Neighbourhoods to Watch:** Byward Market, Lowertown, University of Ottawa and downtown

Table 3: Apartment and Home Price Comparisons for Rideau Station

BYWARD MARKET	Then (2005–2007)	Now (2017–2018)
Rental Rates 2–bedroom apartment:		
City Average	\$962	\$1234
Neighbourhood	\$1800 - \$2800	\$1600 - \$4800
Single–Family Housing Prices:		
City Average	\$225,000	\$386,300
Neighbourhood	\$279,539	\$507,219

To determine the numbers in the table above, the following sources were used:

- The MLS HPI tool has been used to determine the city average price in Ottawa in January 2005 and in May 2018
- Realtors' websites have been used to obtain average current list prices, as well as the historical 2005 average price for the neighbourhood
- Canada Mortgage and Housing Corporation (CMHC) provided the April 2007 and October 2017 average city-wide rental rates for a two-bedroom apartment
- MLS statistics between January 1, 2007 and December 31, 2007 provided the spread of historical rents for a two-bedroom unit in the Byward Market area
- MLS provided the spread of two-bedroom rental prices as of July 3, 2018 for the Byward Market area

Rents and Transportation — New and/or Expanded Studies

McMillen and McDonald (2004) report that rent rates will not be impacted prior to construction given the “speculative benefits of future accessibility do little for the renter.”

A 1996 study reports that distance from a metro station has an adverse and inverse effect on rent. Specifically, for every one-tenth of a mile (161m) increase in distance away from the station, rent decreased by about 2.50 per cent.

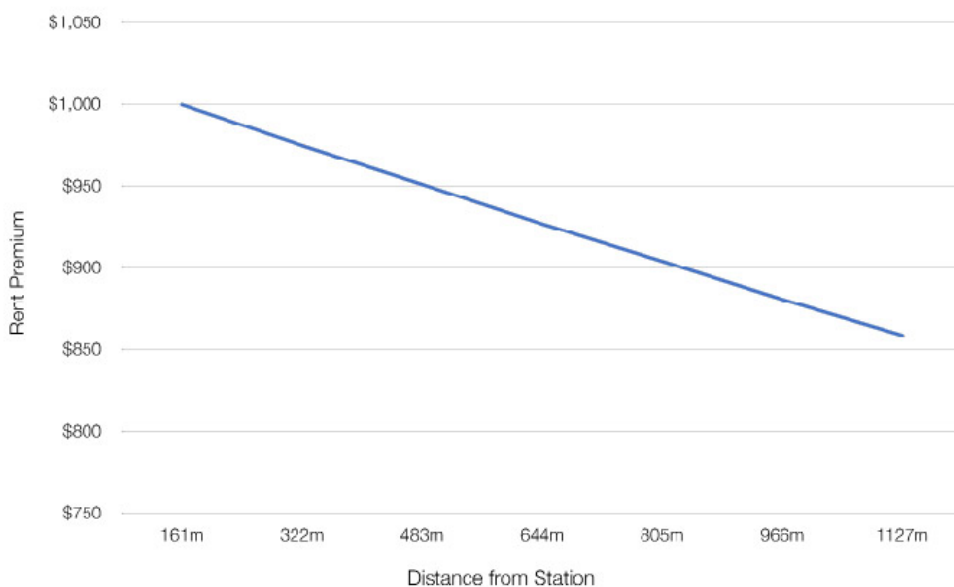
A study in San Francisco focused on the effects of LRT and rental rates in nearby housing. The report found the following:

- Apartment units within one-square kilometer (.62 mile) rented at a 10 per cent premium
- Two-bedroom apartment units rented higher at a 16 per cent premium

Prior to the 2012 opening of Los Angeles' Expo LRT extension, rental prices began to rise in the area. The key finding was the rents were rising by as much as 45.71 per cent, as demand to live near transit, especially in a highly congested city, grew.

In New Jersey, like San Francisco, homes within a 500 to 800 metre (.31 to .50 mile) radius of a station saw the highest increases in rent, which slowly tapered off the farther the property was from the LRT station. Property values were assessed at a premium in neighbourhoods closest to stations, even when the study factored in house size, number of bedrooms, nearby parks and average crime rate in the area.

Figure 12: Rent Premium Based on Distance from Station



Values and Rents:

The No-Go Zone: Proximity to Stations is Key, but Not Too Close

Overall, the transportation effect shows that property values and rents increase with certain proximity to transportation access. However, while there are positive impacts on property values, there are some detractors of living close to a transit station, such as accessibility for criminal activity or other unintended side effects like noise.

Due to these factors, some discussion exists suggesting that being too close to a station, for residential properties, may be detrimental to values and rents. While inconclusive, one may wish to consider this and include a buffer of about 60 metres for residential properties near stations. Some studies show that being too close to a station or access point can hurt residential property values; it is reported that residential properties within 274m decrease in value from 4 per cent to 8 per cent.

Reverse Proof: What Happens to Values and Rents When Transit Disappears?

Recently the impact of transportation effect has been validated, once again, but this time with reverse proof. That means, when transportation access was removed, the transportation effect worked in reverse, with a reduction in rents and property values.

In one New York neighbourhood in North Brooklyn, a portion of its LRT, the L train, is being decommissioned. According to a 2018 *StreetEasy Market Report*, "one-quarter of rentals in North Brooklyn offered a discount in February 2018, the most of any Brooklyn submarket." The report states that while sales prices for homes in the neighbourhood rose 3.3 per cent year-over-year, days on market also increased substantially to a median of 108 days. According to a senior economist with StreetEasy: "Now that any new leases will bleed into the timeframe when the shutdown of the L Train occurs in April 2019, landlords are becoming more liberal with incentives such as discounts to ensure they attract tenants. Renters should consider the reality of limited transportation to these areas, but there are bargains to be found if public transportation isn't needed."

The conclusion? A lack of transit accessibility results in lower rent and lower property prices.

Conclusion

As cities continue to increase in size due to suburban sprawl, and populations continue to grow, governments of all levels are continuously working to upgrade their infrastructure in order to accommodate these changes, the latest focus of which is densification around transit areas. For example, as noted in the *Top Ten Towns and Cities* report for Ontario, released earlier in 2018, the Growth Plan for the Greater Golden Horseshoe area of Ontario names 25 urban growth centres that now have minimum density targets for both persons and jobs, per hectare, along specific transit corridors. As a real estate investor, it is crucial that you pay attention to what is happening in your investment area and look for areas that are bound to see improvements. These changes and updates don't happen overnight, so it is vital you follow announcements, plans and actual construction starts.

There are several ways you can update a REIN *Transportation Effects Report* with the most recent information on the identified projects. First, a city's transit website will provide the best information about current projects given it is usually the most accurate and reliable. You can also follow these agencies on social media for timely and accessible updates. Additionally, you can refer to local news sources, city council documents, and the economic development section of a city's website.

You can also subscribe to our research email list to ensure that you receive updates to this report as they are published by emailing: info@REINCanada.com and asking to be added to the list. And please connect with us on social media by following our Facebook Page – Real Estate Investment Network.

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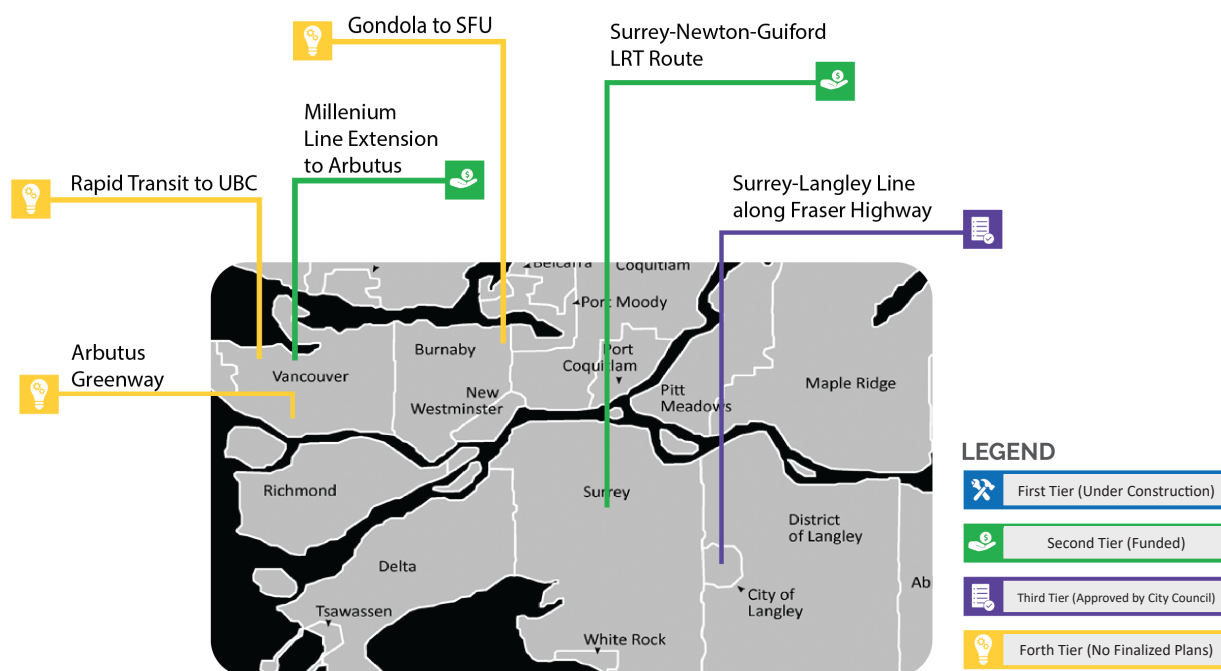


Figure 13: Future Transportation in Metro Vancouver

Metro Vancouver Overview and Insights

This section provides an overview of transportation plans and the City of Vancouver, as well as communities within Metro Vancouver. While the primary focus of the research is rail and highway, these transportation plans consider rail, highway, air, bus corridors and more.

While this report outlines many significant transportation plans, most are in the planning phase, with construction spanning the next 30 years. Further, many of these transit plans impact Metro Vancouver, as opposed to the city of Vancouver. In fact, 23 communities are involved in regional transportation planning, including the communities of Surrey and Langley, which could see up to 19 new LRT stations between them, compared to six new planned SkyTrain stations in Vancouver.

It is important to bear in mind that anything can happen. And that's why REIN encourages you to consider the status of funding and construction stages of transportation announcements before racing to acquire property where transportation is planned. Focus your acquisitions on first tier development, but closely follow the other tiers to guide your research.

Here's a great example as to why:

A study of the transportation effects specific to Metro Vancouver was last undertaken by REIN in 2016. You can see there was a section written on Surrey Rapid Transit, including LRT on the Fraser Highway. The report noted TransLink had not yet identified the preferred option and construction was not expected to begin for eight years. In this report, two years later, you will see that the LRT plans for the Fraser Highway mentioned in 2014 have been solidified and were funded in June 2018, but only to develop a plan and design, and complete the engineering work. Another example comes from Ottawa, where there was a ten-year time span between the announcement of the project to the line opening. A comparison between the plans reported in 2014 in BC to the current plans and funding status of projects reminds us not to invest in real estate based on transportation initiatives until ground has broken! Transportation initiatives are expensive and carry political weight, and thus a lengthy process from concept to the opening of a line or station can be expected.

About Metro Vancouver

The City of Vancouver is the eighth most populous city in Canada with a population of 631,486, according to the 2016 census, while Metro Vancouver is the third-largest Canadian urban area and home to 2.3 million people. Statistics Canada reports that Vancouver, between 2011 and 2016, as a Census Metropolitan Area (CMA) grew to 2,463,431 residents, an increase of 6.5 per cent. Over the next 30 years, Metro Vancouver is expected to welcome 1 million new residents and add 500,000 jobs, which will stimulate more passenger trips per day—"three million more," actually. Within the CMA, Surrey, REIN's #1 city in the 2017 *Top Ten BC Towns and Cities* report, is expecting 300,000 new residents over the next 30 years, which means Surrey will surpass the city of Vancouver for the total number of residents.

While almost 68 per cent of Vancouver city commuters are staying within the census subdivision, a full 31 per cent of commuters are travelling outside the census division, meaning areas of the Fraser Valley as far east as Abbotsford. 39.5 per cent of workers are spending between 15-29 minutes commuting, while 28 per cent spend between 30-44 minutes commuting. The average distance of an automobile trip in the City of Vancouver is 7.5 - 10.3 kilometres, depending on the nature of the trip, while transit trip average between 10.3 and 11.1 kilometres. Most people walk an average of 1.8 kilometres for their commute.

Metro Vancouver was recognized for holding the record for having the longest fully automated rapid-transit system in the world. Metro Vancouver's SkyTrain currently has 79.6 km of track and 53 stations. There are three integrated lines:

- The Expo Line opened in 1986 and connects Vancouver to the cities of Burnaby, New Westminster and Surrey
- The Millennium Line opened in 2002 and travels from Vancouver through Burnaby into Port Moody and Coquitlam
- The Canada Line connects downtown Vancouver to the Vancouver International Airport (YVR) and Richmond

Who Uses Transit?

Overwhelmingly, in Vancouver, it is the youth who primarily utilize transit, while those aged 25-44 comprise the largest group of walkers. The 45-64 demographic is not accessing alternative methods of transportation as heavily as other age groups. Geographical patterns to modes of transportation are also evident and being studied by the City of Vancouver to guide improvements that will be provided to the populace. The overall transit system in Metro Vancouver means that more than 90 per cent of the places where people live and work can be reached by public transit, which is a much higher level than most comparably sized regions in North America. "Due to population growth, a strong economy, and denser, transit-oriented patterns of development, demand for transportation—especially transit—is increasing rapidly. From 2000 to 2016, transit ridership in our region increased 80 per cent. In comparison, the regional population only grew 20 per cent over the same time."

A recent update from Translink advises that throughout 2016 and 2017, given the opening of the Evergreen extension and increased service on all three lines, there were "407 million transit boardings in 2017—the highest ever in this region. In fact, transit ridership grew more in Metro Vancouver than any other region in Canada and the United States in 2017." Despite an established car culture in the West, the numbers clearly indicate a cultural shift in Vancouver as people are electing not to drive.

For example, the City of Vancouver reports that since 2007, there has been a 32 per cent decrease in distance driven per person, exceeding the original 2015 goal of a 20 per cent reduction. Vancouver also reports it has achieved its strategy target to have 50 per cent of all trips taken by transit, bike or on foot. The city's goal is to see two-thirds of all trips made in Vancouver conducted by active modes of transportation, or by transit, by 2040.

Almost 44 per cent of Vancouver city's workers commute. Of those respondents to the 2016 census question who commute, 49 per cent travel to work in a private vehicle, either as driver or passenger, while 29.7 per cent take public transit. In contrast, 20 per cent of Vancouverites either walk or bike to work. Yet, the Vancouver reports 23 per cent of residents

walk to work, and 10 per cent cycle to work, with the average bike trip surpassing five kilometres. Results of the 2016 of Vancouver transportation survey shows that while the number of trips made in a car dropped by 3 per cent between 2013 and 2016, transit ridership also fell by 2 per cent during that same time frame. Cycling accounted for the share of difference in the modes of transportation.

The Changing Face of Metro Vancouver

The geographical wonders that make Metro Vancouver so beautiful, like the North Shore Mountains, the Fraser River and the Strait of Georgia, also constrain the implementation of infrastructure, as does the limited number of available industrial parcels of land. These constraints prohibit the building of a ring road in the same fashion many Prairie and Eastern cities have ring roads. Conversely, Vancouver's landscape demands creative solutions, which is demonstrated in the Other Funded Vancouver Transportation Plans section.

One way of tackling transportation issues is to create new urban centres, where people are encouraged to live, work and play in a centralized location. For example, Metro Vancouver's Regional Growth Strategy designates seven regional town centres, also called regional city centres:

1. Central Richmond (No. 3 Rd. and Brighthouse)
2. North Vancouver (Lower Lonsdale)
3. Southwest Burnaby (Metrotown)
4. New Westminster (Downtown)
5. Coquitlam (Coquitlam centre)
6. Langley (Willowbrook area)
7. Maple Ridge

For example, Coquitlam's City Centre is becoming the "'downtown' for the Northeast Sector of Metro Vancouver, providing a full array of retail, office, cultural, recreational and educational services for this part of the Region." Vancouver's 2016 walking and cycling report card acknowledges the city's vision to have a "smart and efficient transportation system, [which] cannot be achieved without land use mix and density, [and] infrastructure," and the culture that supports these sustainable lifestyle changes.

The Guiding Documents

In July 2013, a Regional Transportation Strategy was created. The long-term strategy "sets out the vision, goals, principles, strategies, and key initiatives to help guide transportation decisions in Metro Vancouver until 2045." The 10-Year Vision for Metro Vancouver Transportation is the plan that supports the strategy and is Vancouver's biggest transportation expansion. It is a region-wide integrated plan, including LRT, bus improvements, and road and bridge construction that supports the 30-year Regional Transportation Strategy and Regional Growth Strategy. The 10-year plan prioritizes transportation actions into three phases. Each regional town centre has also created its own living transit plans supplemental to these larger plans, each meant to be implemented and updated as time passes.

Phase 1 of the Regional Transportation Strategy is well underway, having been approved in November 2016 with approximately \$2 billion in funding from all three levels of government. Implementation of this phase began in 2017. Overall, an increase of 20 per cent in rail service is expected to result from these plans.

The engagement portion of Phase just ended in May 2018. With recent approval of funding from all three levels of government, the projects in the Phase 2 Plan will begin to advance in late 2018, and Metro Vancouver residents will start to see the new transit services as early as 2019. On September 5, 2018, Prime Minister Justin Trudeau and BC Premier John

Horgan announced the approval of more than \$3 billion in federal and provincial funding for the Broadway Subway and the Surrey-Newton-Guildford Light Rail projects specifically. With the implementation of the Phase 2 Plan, “transit ridership is forecast to increase from 248 million journeys in 2017 to 316 million journeys in 2027.” The unprecedented total of \$7.3 billion includes funding for the following projects, as well as other important service improvements including transit expansions for bus and upgrades to SkyTrain stations, new SkyTrain tracks, and HandyDART:

- construction of the Surrey-Newton-Guildford LRT line to provide new rapid transit options for Surrey
- construction of the Millennium Line Broadway Extension to extend SkyTrain on the busiest transit corridor in our region
- modernization of existing lines (Expo and Millennium) so that capacity can be increased with the purchase of new cars
- planning for the Simon Fraser University gondola and an extension of the LRT to the University of British Columbia (UBC)
- project development of the Surrey-Langley LRT line, including planning, design and engineering
- funding to the municipalities for major road upgrades

Phase 3 is anticipated is anticipated to be developed in 2019 and implemented beginning in 2020. Included in the funding approval for this phase is the construction and operation of a LRT line from Surrey to Langley. Phase 3 will fund projects during the years 2022 to 2026, to complete the 10-year plan.

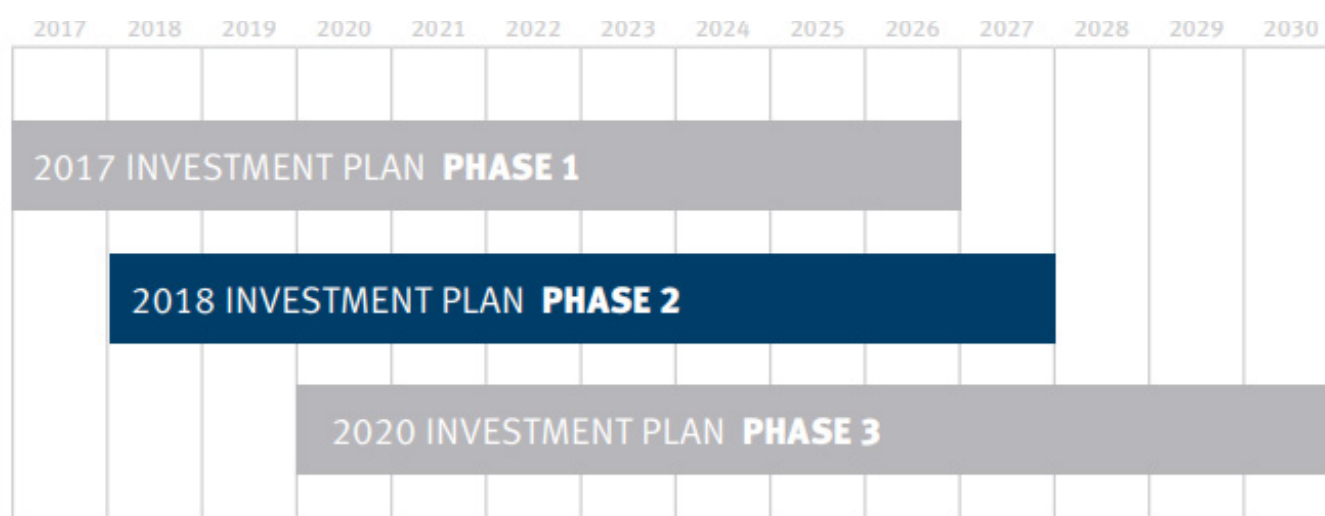


Figure 14: A Timeline of the 10–Year Vision Split into Three Phases

In June 2017, TransLink released its first ever regional goods movement strategy, with the intent of creating actions and strategies to align Metro Vancouver’s dual role as a large metropolitan area and major multi-modal international trading hub. The report, *Moving the Economy*, contains TransLink’s focus on maintaining and improving the city’s role as Canada’s Pacific Gateway, connecting British Columbia to the rest of Canada, Asia, and beyond. “The movement of goods is complex, entailing the interaction and coordination of many modes—road, rail, marine, air, and pipeline—and of numerous public agencies, private firms, and shippers and receivers.” Along with bridge work mentioned below, finding a long-term solution connecting highways 1 and 91A north of the Fraser River is one declared initiative. For an explanation of mobility pricing, which is a priority of the strategy and expected to be implemented in the next five to eight years, refer to page 28 of that report.

Funding Stages and Transportation Plans

Funding for the regional share of Phase 2 of the plan, approximately 8.6 per cent or \$73 million annually, will come from a variety of sources, including property tax increases, transit fare increases, increasing the motor fuel tax, and a parking tax increase. “The changes would affect transit users, drivers, property owners, and real estate developers.” Further, TransLink will work to “develop real estate and commercial partnerships that support sustainable transportation and generate non-tax revenue” by creating development adjacent to TransLink infrastructure, increasing retail opportunities at transit stations, and providing customer amenities like Wifi through agreements with commercial entities.

The areas that will be most significantly impacted by transportation upgrades are divided into tiers, dependent on how the neighbourhood is imminently impacted by new and/or proposed LRT lines:

- Under Construction: N/A
- Funded: South Main, Mt. Pleasant, South Granville, Arbutus Ridge, Guilford, City Centre, and Newton
- Approved by City Council: Johnson Heights, Fleetwood, North Cloverdale West, East Clayton West, Clayton, North Cloverdale East, and Willowbrook
- No Finalized Plans: Kitsilano, Jericho, West Point Grey and UBC

You can refer to the opening colour coded LRT map of Metro Vancouver to visually locate the areas of the city these neighbourhoods are located in.

Under Construction

Seven stations along the Expo line are in varying stages of upgrading; some stations have been completed, while work on other stations has yet to begin.

There are currently no highway or LRT projects under construction.

Consider the impact of station design and revitalization at a micro level and within the context of REIN’s Transportation Effect.

Funded

LRT

None of the proposed LRT line extensions or new routes noted below have been allotted a construction start date. It is important to monitor the buzz around the creation and expansion of transportation projects in the city. Transportation proposals are never certain until the ground is broken, and can be impacted by politics, big business expansions, world events, and advances in science and technology.

Remember, this is where a strategic investor can start watching closely for ground to break.

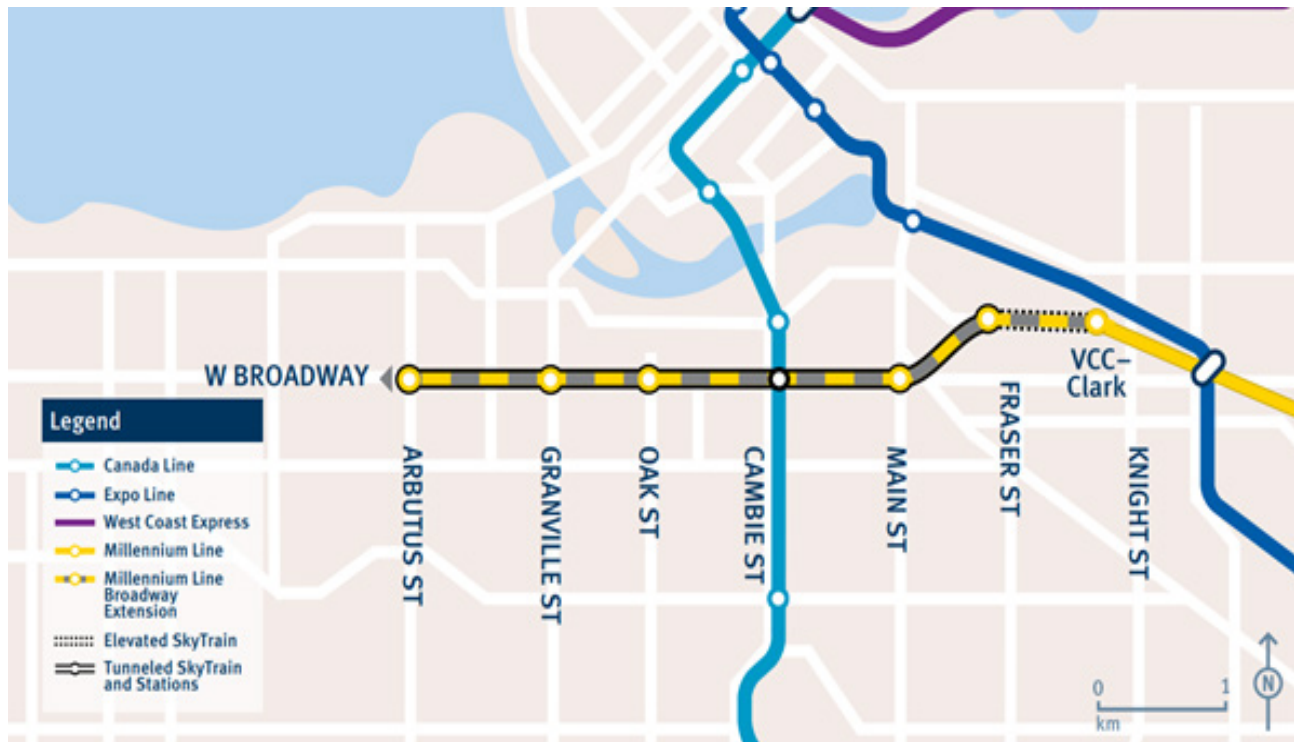


Figure 15: Broadway Extension

Broadway Extension Summary (Clark to Arbutus):

- **City Quadrant:** South of the downtown core
- **Name of Line:** Millennium
- **Construction/Completion Status:** Awaiting construction. Procurement to begin in 2018
- **Funding Status:** Funded in June 2018
- **Date of Completion:** Anticipated completion date 2025 (estimated to take five to six years to build)
- **Location:** Runs along West Broadway. Phase 1 connects to the Canada Line at Cambie Street and has six new stations over 5.7 kilometres, primarily underground
- **Type:** Primarily underground, but will have an elevated portion
- **Neighbourhoods to Watch:** South Main, Mt. Pleasant, South Granville, and Arbutus Ridge



Figure 16: South of Fraser Rapid Transit

South of Fraser Rapid Transit Summary (Phase 1):

- **City Quadrant:** Surrey
- **Name of Line:** Surrey-Newton-Guildford Line
- **Construction/Completion Status:** Construction bidding process has begun
- **Funding Status:** Funded in June 2018
- **Date of Completion:** Completion 2024 (estimated to take three to five years to build)
- **Location:** 104 Avenue and King George Boulevard Eleven stations over 10.5 kilometres.
- **Type:** Street level, low-floor LRT with dedicated train-only lanes
- **Neighbourhoods to Watch:** Guildford, Alluvia, Newton, Saint Helen's Park and East Newton North

Highway/Major Road Improvements in Vancouver

Vancouver/UBC Area

The city's 2040 transportation plan includes a potential removal of both the Georgia and Dunsmuir viaducts, to be replaced with at-grade roads. However, a 2015 report acknowledges this work is "unlikely ... to be completed within the five-year time-frame," which is prior to 2020. Two pedestrian plazas are also being considered: the 800-block of Robson Street and the 600-block of Cambie Street, which would close roads and redirect transit.

Burnaby — New Westminster

In February 2018, the province agreed to fund and build a new Pattullo Bridge; the original opened in 1937. The planning and preliminary engineering has already been completed, and it is anticipated that construction of the new bridge will begin in 2019. The new four-lane bridge should be completed by 2023, at which time the old bridge will be removed. The bridge is designed for a future expansion to six lanes. The bridge will be funded through user pricing.

Approved by City Council

South of Fraser Rapid Transit Summary (Phase 2):

- **City Quadrant:** Surrey and Langley
- **Name of Line:** Surrey-Langley Line
- **Construction/Completion Status:** Project development including planning, design and engineering, possibly early works
- **Funding Status:** Funded in June 2018
- **Date of Completion:** Estimated 2020 to 2023
- **Location:** Fraser Highway, beginning at King George Boulevard. Eight stations planned
- **Type:** LRT
- **Neighbourhoods to Watch:** Johnson Heights, Fleetwood, North Cloverdale West, East Clayton West, Clayton,

North Cloverdale East, and Willowbrook

No Finalized Plans

Broadway Extension

- **City Quadrant:** Vancouver
- **Name of Line:** Millennium
- **Construction/Completion Status:** At planning stage
- **Funding Status:** Current phase is funded
- **Date of Completion:** 2018 to 2020
- **Location:** West Broadway
- **Type:** LRT
- **Neighbourhoods to Watch:** Kitsilano, Jericho, West, Point Grey and UBC

Some Community Nodes in Metro Vancouver

Transit-orientated communities (TOCs) are of such importance in managing populations, infrastructure improvements and transportation plans that you can find an entire section on this topic on TransLink's website. The agency reports "transit-oriented communities are a key part of creating communities that are more livable, sustainable and resilient. TOCs not only support viable sustainable transportation choices, they also result in lower levels of vehicle use, reduced greenhouse gas emissions, improved air quality and healthier lifestyles and can support other community goals as well."

There are several master-planned community nodes being developed throughout the Metro Vancouver and Fraser Valley, with most focussing on transportation and speaking to growing cultural diversity.

Some recent examples are:

- Yaletown, Vancouver
- Olympic Village, Vancouver

In development are:

- Cambie, Vancouver
- River District, Vancouver
- The Amazing Brentwood, Burnaby
- The City of Lougheed, Burnaby

About Cambie and River District, Vancouver

In Vancouver itself, in the south-east corner bordering Burnaby and across the river from Richmond, is a master-planned community called River District, which will be getting new bus service. In Vancouver, Cambie Gardens is underway, located

next to a potential future SkyTrain station. Investors keen to capitalize on urban densification projects built around transit and community living have no shortage of options in the Greater Vancouver area. A quick search reveals plans either in the concept phase, pre-sales phase or breaking ground in almost every community in Metro Vancouver.

About The Amazing Brentwood and The City of Lougheed, Burnaby

Closer to Vancouver, Burnaby has two master-planned communities under construction that feature SkyTrain stations: The Amazing Brentwood and The City of Lougheed. According to the developer's website, both communities "feature shopping, dining, living and entertainment on one connected site." The 28-acre neighbourhood in Brentwood will include 11 towers creating 6,000 homes, an onsite SkyTrain station, "parks, plazas and boulevards," offices to create a hub for commerce, and cruiser bikes to borrow. The 37-acre Lougheed property will have more than 20 high-rise towers, pedestrian and biking routes, "and the most connected SkyTrain hub in Metro Vancouver." This community will incorporate two on-site SkyTrain lines and a major bus loop to create one of the region's busiest transit exchanges." The website states: "By design, transit is expected to be the most convenient way to access the site, as well as the most enjoyable." Much like the other master-planned multi-use space communities previously mentioned, the city of Lougheed is expected to take 30 years to fully manifest.

Urban Centres Designations

Another regional planning tool that might interest potential investors is Metro Vancouver's Urban Centres designation, which names three different types of urban centres depending on the scale and function of the centre. The three types of Urban Centres include Metro Centres (#1 & #2 on the list); Regional City Centres (#3 to #9 on the list); and previously mentioned on page 4) and Municipal Town Centres (#10 to #26) on the list). All "share the common elements of transportation accessibility and planned residential and employment growth." A total of 26 areas, connected to a frequent transit network, have been identified:

- | | |
|----------------------------------------------|----------------------------------------|
| 1. Downtown Vancouver | 14. Lougheed, Burnaby/Coquitlam border |
| 2. Surrey Metro Centre | 15. Inlet Centre, Port Moody |
| 3. Richmond Centre (No. 3 Rd. and Brighouse) | 16. Port Coquitlam |
| 4. Lonsdale, North Vancouver | 17. Pitt Meadows |
| 5. Metrotown, Burnaby | 18. Oakridge, Vancouver |
| 6. New Westminster (Downtown) | 19. Ladner, Delta |
| 7. Coquitlam Centre | 20. Semiahmoo, White Rock |
| 8. Langley Centre (Willowbrook area) | 21. Cloverdale, Surrey |
| 9. Maple Ridge Centre | 22. Newton, Surrey |
| 10. Ambleside, West Vancouver | 23. Fleetwood, Surrey |
| 11. Lynn Valley, North Vancouver | 24. Guilford, Surrey |
| 12. Brentwood, Burnaby | 25. Willoughby, Langley |
| 13. Edmonds, Burnaby | 26. Aldergrove, Langley |

These areas have targets established for both dwelling unit numbers and employment growth, while mixed-use and affordable housing is expected in the immediate vicinity of a frequent transit development area. The report notes, in line with research findings, that frequent transit development areas “should be located generally within 800 metres of a rapid transit station or within 400 metres of TransLink’s Frequent Transit Network.” Please Figure 17 below to visually locate these urban centres.

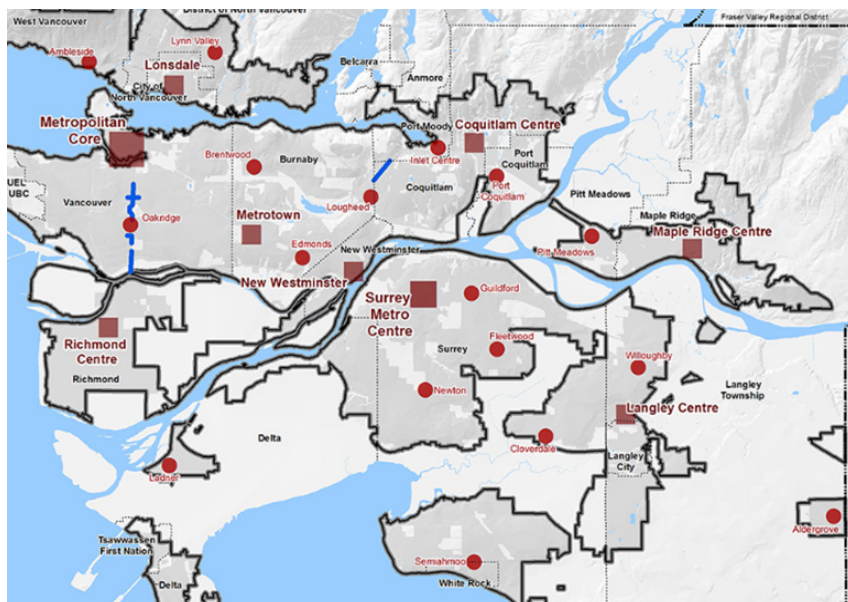


Figure 17: Urban Centres & Frequent Transit Development Areas

Beyond Trains: Other Transportation Projects Planned for Vancouver

The only project related to transportation that has broken ground recently is a \$9.1 billion-package of upgrades that will occur over the next 20 years at Vancouver International Airport (YVR) in Richmond. YVR is reportedly one of the fastest growing airports on the continent, and in 2017 a record for the airport of 24.2 million people touched down on the runway and walked out of the terminal, needing transportation to move them to their destination. By 2022 the airport forecasts 32 million travellers will utilize the gateway airport annually.

Consider the impact of this infrastructure at a macro level and within the context of REIN’s Transportation Formula.

Gondola

Burnaby Mountain Gondola Summary:

- **City Quadrant:** Burnaby
- **Name of Line:** N/A
- **Construction/Completion Status:** At planning stage. A 2018 updated assessment was completed.
- **Funding Status:** Current phase is funded
- **Date of Completion:** Project development will occur in 2019 and 2020
- **Location:** Will potentially run between Production Way/University Station and SFU Square on Burnaby Mountain
- **Type:** Gondola
- **Neighbourhood to Watch:** Sullivan Heights

Streetcar

Arbutus Greenway Summary (False Creek to the Fraser River):

- **City Quadrant:** South of the downtown core
- **Name of Line:** N/A
- **Construction/Completion Status:** At planning and design stage
- **Funding Status:** Land purchased
- **Date of Completion:** N/A
- **Location:** Runs north-south through Vancouver. See <https://vancouver.ca/files/cov/walking-cycling-in-vancouver-2016-report-card.pdf> (p.25)
- **Type:** Streetcar



- **Neighbourhoods to Watch:** Kitsilano, Fairview, Arbutus Ridge, Shaughnessy, Quilchena, Kerrisdale, SW Marine, South Granville and Marpole

Bus and Bus Rapid Transit (BRT)(Called the B-Line)

Vancouver/UBC Area

In August 2015, a report detailing a bus service review in downtown Vancouver was produced, meant to be implemented between 2016 and 2020. The review was needed given the population living downtown has more than doubled in the last 20 years, primarily in neighbourhoods like Yaletown and False Creek. There is speculation that a free circulator bus may be implemented downtown.

Based on a 2018 report regarding funding for phase two plans, the following is expected:

- new service will be implemented to River District, a master-planned community
- reduced overcrowding and wait times for buses
- extending the hours of service on some bus lines

In Fall 2019, a new B-line is expected to become operational between the Joyce-Collingwood stop on the Expo Line, through to UBC, with many stops, including Canada Line's Oakridge station.

Figure 18: Arbutus Greenway Streetcar

Burnaby / New Westminster

A new B line from Richmond to the Expo Line B-Line will be implemented. Expansions and improved service are the other focus for this geographical area.

North Shore Area (North Vancouver, West Vancouver, Village of Lions Bay, Bowen Island, Squamish Nation, and Tsleil–Waututh Nation)

The area transit plan impacting these communities was released in 2012. Thirteen high-priority projects were identified and are expected to be delivered before 2022. This report identifies the need to conduct further investigation into future rapid transit corridors. The 2018 Phase 2 Funding Plan indicates new and expanded service designed to reduce wait times and overcrowding is coming.

A new BRT line is proposed and expected to become operational in Fall 2019. The line runs between the Phibbs Exchange and Dundarave. The Phibbs Exchange is also slated for improvements.

In August 2018, the results of the Integrated North Transportation Planning Project were published. It was recognized that congestion had reached critical levels on the North Shore: “due to its geography, topography, and existing transportation network, the North Shore faces considerable transportation challenges including significant road congestion and a lack of competitive and sustainable options.”

Southwest Area (Richmond, South Delta, and Tsawwassen First Nation)

A new BRT Line from Richmond to the Expo Line B-Line will be implemented. Improvements to extend connections to Tsawwassen Ferry Terminal will be created. A new bus exchange will be built in Steveston, along with new transfer sites at Highway 99/Highway 17A. An expansion of the frequent transit network will be implemented. An increase of approximately 35 per cent in transit service is expected overall.

Northeast Sector (Coquitlam, Port Coquitlam, Port Moody, Anmore, and Belcarra)

By expanding the service area and extending hours of service, the plan seeks to optimize routing and increase the usefulness of transit, particularly in the Port Moody region.

A new BRT line is expected to become operational in Fall 2019 between Coquitlam Central and Haney, running along the Lougheed Highway.

South of Fraser Area (Surrey, Langley, Delta, and White Rock)

The area transit plan for these communities was created in 2007, with an update published in 2015. As of the date of the latter report, the implementation of a BRT along Fraser Highway had not been started, while BRT from White Rock Centre to Guilford was in the process of being implemented. It appears from the most updated plans that a BRT line from Delta to White Rock is not imminent, while a BRT line from Surrey Central to Langley will run along the Fraser Highway and go into effect in Fall 2019.

According to the 2018 Phase 2 Funding Plan, a new BRT line will be implemented between Scott Road (120th Street) and the Newton Exchange. There are several new service routes, a focus on reducing overcrowding and wait times, and many extensions to hours of service outlined in the report.

Langley will be home to two new transit exchange facilities. The new downtown exchange will be built on a future extension of 203A Street. The new Willowbrook exchange will be built on a future street grid to the east of 196th Street.

Maple Ridge/Pitt Meadows

An area transport plan is being created, and a restructured network will be built based on the outcome of this process. A B-line for the Lougheed highway is expected in 2019.

North Shore Area (North Vancouver, West Vancouver, Village of Lions Bay, Bowen Island, Squamish Nation, and Tsleil–Waututh Nation)

No projects planned.

Southwest Area (Richmond, South Delta, and Tsawwassen First Nation)

In April 2018, the area's transport plan was created. Identifying additional road corridors for inclusion in the Major Road Network was one of the recommendations made. However, no concrete plans have been finalized. The plan states the George Massey Tunnel will be replaced with a new tolled bridge with dedicated transit-priority lanes.

Northeast Sector (Coquitlam, Port Coquitlam, Port Moody, Anmore, and Belcarra)

No projects planned.

South of Fraser Area (Surrey, Langley, Delta and White Rock)

No projects planned.

Maple Ridge–Pitt Meadows

A comprehensive review of the transportation network in this area is underway with the consultation phase behind us. The intent is to create a blueprint of the unique transportation needs of these communities to guide future transit and transportation needs.

SeaBus

One new vessel will be acquired and put into service on the Vancouver–North Vancouver run.

The West Coast Express (WCE)

The West Coast Express (WCE) is a commuter rail service operating during peak morning and evening hours during the weekday, moving commuters between downtown Vancouver and Mission, making this small Valley city and nearby Abbotsford, the #2 town in REIN's 2017 Top Ten BC Towns and Cities report, communities that should be on the radar of



Figure 19: Bus and Bus Rapid Transit

both investors and home buyers. “Every weekday more than 11,000 customers get on/off WCE at one of eight stations going to/from downtown Vancouver and Mission.” Most stations have park and ride facilities.

Phase 3 of the 10-year transportation plan includes expanding the capacity of the WCE by two cars.

Metro Vancouver Summary

The 2018 *Southwest Area Transport Plan*, created by the communities of Richmond, South Delta, and Tsawwassen First Nation, indicates the local governments involved have an interest in seeing rapid transit expand across the “South Arm of the Fraser River to serve travel between Richmond and Delta.” However, decisions of that magnitude must be considered and addressed via regional plans. No doubt there are several communities that desire LRT development.

As cities continue to increase in size due to suburban sprawl, and populations continue to grow, governments of all levels are continuously working to upgrade their infrastructure to accommodate these changes.

As noted throughout this report, the latest focus of urban planning is densification around transit areas. For example, as noted in the *Top Ten Towns and Cities* report for Ontario, released earlier in 2018, the Growth Plan for the Greater Golden Horseshoe area of Ontario names 25 urban growth centres that now have minimum density targets for both persons and jobs, per hectare, along specific transit corridors. Metro Vancouver has a similar focus to work with partner agencies to support the focussing of population and job growth in urban centres.

Therefore, the reader is encouraged to review the document *Phase 2 of the 10-Year Vision* to review how housing and transportation are implicated with each other. As a real estate investor, it is crucial you pay attention to what is happening in your investment area and look for neighbourhoods that are bound to see improvements. These changes and updates do not happen overnight, so it is vital you follow announcements, plans, and actual construction starts.

There are several ways you can update a REIN *Transportation Report* with the most recent information on the identified projects. First, a city’s transit website will provide the best information about current projects given it is usually the most accurate and reliable. You can also follow these agencies on social media for timely and accessible updates. Additionally, you can refer to local news sources, city council documents, and the economic development section of a city’s website.

Or connect with us for regular updates.

Please Note: Not all properties in these regions may be appropriate for your portfolio or circumstances, so make sure you complete your diligence on all properties before you purchase by applying REIN’s Property Goldmine Scorecard.

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